TYPE	DATE	TIME		AGENCY	DESCRIPTION	PAGE
Area Forecast Discussion	9/30/2018	2130	PDT	San Diego	Weakening tropical cyclone Rosa is expected to move across northern Baja Monday and Arizona Monday night and Tuesday. This will bring moisture over southern California which will combine with some instability to produce scattered showers and isolated thunderstorms through Tuesday, mainly in the mountains and deserts. Some thunderstorms occurred late this afternoon and early this evening overthe far southern San Bernardino Mountains, including near Forest Falls and over the southern Coachella Valley, along with a few other isolated showers. Precipitation has ended for now, though showers over northern Baja could move into mainly souther and eastern San Diego County later tonight. Moisture will be abundant below about 500 MB Monday, which will allow for another chance of showers and thunderstorms, with best chances over the mountains and deserts....	**44**
Area Forecast Discussion	9/30/2018	2201	MST	Phoenix	Scattered to numerous showers and thunderstorms at times can be expected into Wednesday. This will cause localized flash flooding. For most areas, the most significant rainfall is expected to occur Monday night through Tuesday night. Phase one of this multiday weather event started several hours early with very strong storms over Yuma County already having occurred as of this writing.....This is being driven not only by a preliminary push of moisture but also one or more perturbations/PV anomalies ahead of Rosa....As for Rosa, the latest NHC Advisory has it as barely a Cat 1. It will continue to weaken and by late Tuesday morning will be only a tropical depression centered just southeast of Yuma,	**47**
Area Forecast Discussion	10/1/2018	0312	PDT	San Diego	Low, marine clouds were nowhere to be found in advance of T.S. Rosa, which will make landfall later today some 260 miles SSE of San Diego in northern Baja CA. **The higher clouds rotating around the system cover the SE half of the forecast area, and rain is falling farther SE across parts of Imperial County and areas south of the International Border**...A trough over the EastPac and a ridge over the eastern Conus has SoCal in a SW flow aloft which is steering Rosa well inland. The trough over EastPac will continue to deepen through early Wed as it moves toward the CA Coast....The trough off the Coast has been handled fairly consistently of late with the medium range guidance. **They show a large cut-off forming off the NoCal Coast and dropping south offshore as energyparcels swing around it. The final vort packet swings around the low, driving the system inland late Wednesday and weakening it rapidly as it moves east toward Las Vegas.** This track keeps the heaviest rain potential to the north of the forecast area, but it still looks like sufficient dynamics and instability could bring a band of showers and isolated thunderstorms to the Coast and inland Wed afternoon into Wed night.	**50**
Area Forecast Discussion	10/1/2018	1002	PDT	San Diego	The morning Miramar/San Diego sounding registered Precipitable Water (PW) at 1.60 inches. This is near the maximum recorded on this date (1.71"). This is moisture from Rosa which has been increasing across SoCal since yesterday. **This high moisture will set the stage for a monsoonal type patter today with showers and thunderstorms developing over the mountains and deserts where the highest moisture and convergence will exist.**	**53**

Area Forecast Discussion	10/1/2018	1239	MST	Phoenix	The start of the long awaited heavy rainfall event has begun, as deep tropical moisture associated with former hurricane Rosa continued to pour into far southeast California and Arizona. Radar at 2 am showed widespread showers spreading north across the area, with the most significant showers located from the lower Colorado River valley eastward into southern Gila County. **Currently Rosa is a tropical storm and is located off the central coast of Baja California, and she is being steered towards the north northwest ahead of a large upper low that is steadily approaching the California coast....Wednesday and Wednesday night will still be quite unsettled, as the upper trof to our west moves inland and across the area during this time; expect scattered to numerous showers and isolated thunderstorms Wednesday, decreasing a bit from the west overnight as the low progresses east and into eastern Arizona.**...	**56**
Area Forecast Discussion	10/1/2018	1415	MST	Phoenix	Tropical Storm Rosa was centered just to the west-northwest of the Baja Spur early this afternoon. The NHC forecast track remains largely unchanged from what it has been for the past few days. The path brings the lower level circulation roughly along a line from Rocky Point, Mexico (5 am Tuesday) to Page, AZ (5 am Wednesday)....The axis of heaviest rain accumulation through Tuesday night is eastern Yuma County, eastern La Paz, western Pima, northern and western Maricopa, and areas north and east of there - especially Yavapai County. There is a tighter gradient on both the east and west sides of that corridor.....**Also, as the southwesterly flowmoves in behind the departing Rosa remnants, but ahead of the brunt of the trough, there will be dry advection....**	**60**
Area Forecast Discussion	10/1/2018	2117	MST	Phoenix	Latest IR imagery reveals that the mid-level circulation of TC Rosa has become dominant, with colder cloud tops across the northern Gulf of California generally propagating eastward. Some higher reflectivities have developed across southern Yuma County, though the bulk of the rain so far this evening has generally been light across Arizona. Highest observed totals over the past 12 hours are across Yuma County, but are less than a quarter of an inch.	**63**
Area Forecast Discussion	10/2/2018	0238	PDT	San Diego	Lingering moisture from Rosa will continue to support at least a chance of some scattered shwrs/tstms today, especially with daytime heating over the mts, and possibly the Elsinore Converge Zone. Otherwise, most areas will experience fair and dry, but humid conditions with seasonal temps. **A large area of low pressure was cut-off off the NoCal Coast overnight. the low will spin south off the Coast through Wednesday and then is forecast to charge inland Wed night near Pt. Conception.**This feature will swing rapidly east Wed night/Thu morning, but a weak trough will persist along the West Coast, keeping onshore flow, a marine layer, and slightly cooler than average weather.	**67**
Area Forecast Discussion	10/2/2018	0330	MST	Phoenix	At 3 am this morning, radar indicated widespread rain and rain showers across much of Arizona, associated with tropical moisture streaming into the area ahead of former hurricane Rosa. Most of the showers are in the light to moderate category with very isolated heavy pockets of rain. Most of the showers are east of the lower Colorado River valley, and with the remnants of Rosa continuing to be steered to the north-northeast, the heaviest bands of showers will gradually push east and focus more and more over south central Arizona by this afternoon. Rosa is now just a tropical depression...**Rosa's mid level circulation and the deep tropical moisture plume will continue to be steered to the northeast today into Wednesday ahead of a large Pacific upper low that continues to approach the California coast.**	**69**

Quantitative Precipitation Forecast	10/2/2018	0332	PDT	San Diego	Precipitation Forecast in Inches in 6Hour Periods.....Coachella Valley...Palm Springs 0.02 0.03 0.00 0.00 0.00 0.01 0.02 0.01 0.00 0.00 0.00 0.00 Thermal 0.02 0.03 0.00 0.00 0.00 0.00 0.01 0.01 0.00 0.00 0.00 0.00 ...San Diego County Mountains. Mount Laguna 0.02 0.02 0.02 0.00 0.02 0.01 0.16 0.05 0.02 0.00 0.00 0.00 Campo 0.05 0.02 0.00 0.00 0.02 0.01 0.03 0.03 0.02 0.00 0.00 0.00	72
Area Forecast Discussion	10/2/2018	0525	MST	Phoenix	At 3 am this morning, radar indicated widespread rain and rain showers across much of Arizona, associated with tropical moisture streaming into the area ahead of former hurricane Rosa...**will continue to be steered to the northeast today into Wednesday ahead of a large Pacific upper low that continues to approach the California coas**t.	77
Area Forecast Discussion	10/2/2018	1319	MST	Phoenix	..Axis of very rich moisture is focused across southwest and southcentral Arizona, featuring precipitable water values in excess of 1.7 inches....**Of additional concern this afternoon, scattered clearing within the thicker cloud cover is contributing to stronger pockets of heating primarily south and west of Phoenix, and visible satellite imagery is noting lowtopped convection developing in spots**.....**AVIATION.**..Southeast California/Southwest Arizona including KIPL and KBLH: **Light showers will persist around KBLH through the morning with drier conditions further west.** Cigs will maintained in a 4-6K ft range for much of the day with only periods where cigs scatter. Conditions should improve substantially after sunset.	80
Record Event Report	10/3/2018	0125	MST	Phoenix	...A RECORD RAINFALL OF 0.39 INCHES WAS SET AT YUMA AZ YESTERDAY. THIS BREAKS THE OLD RECORD OF 0.12 SET IN 1954.	82
Area Forecast Discussion	10/3/2018	0247	PDT	San Diego	...**A cutoff low pressure system is slowly moving into central and Southern California today.** A few sprinkles or light showers are already passing through L.A. County. Sprinkles or very light showers will be gradually increasing during the day from west to east, but the best chance of showers appears to be this evening and overnight. There is also a small chance of thunderstorms between about 4 to 8 pm, mainly north of SD County where it will be more unstable....**Winds will pick up in the mountains and deserts during afternoons through the nights through Thursday. Gusts will be mostly in the 30 to 40 mph range**.....**AVIATION.**..Deserts...A few light showers are possible 22-06Z this afternoon and evening, mainly over the high desert. SW to W winds will increase around 22Z with sfc gusts 30-40 kt along the desert mountain slopes and into the deserts. MOD-STG UDDFS, rotors, and LLWS possible over and NE/E of the mountains this afternoon and evening. Winds will gradually decrease after 04/06Z.	83
Area Forecast Discussion	10/3/2018	0310	MST	Phoenix	More showers with embedded thunderstorms will develop today ahead of weather disturbance moving into the region from the Pacific....**Meanwhile, a deep Pacific PV anomaly was translating eastward towards the southern California coast with height falls, midlevel cold advection, and favorable jet energy providing the initial glimpses of synoptic forced ascent inland.**....The Pacific wave will rapidly begin to fill and and lift into the Great Basin later tonight and Thursday leading to deeper advection of dry air and more notable subsidence spreading into the region.	85

Area Forecast Discussion	10/3/2018	0940	PDT	San Diego	...The showers were moving northeast in deep layer southwest flow aloft ahead of a deep closed low centered 700 miles west of San Diego, so not much rain will fall through early afternoon in our area....This band of clouds and precipitation will slowly move east today, ejected eastward as a shortwave rounds the base of the trough and accelerates its eastward movement....The lower deserts will be hard-pressed to see much rain, but a few convective cells may make it over the mountains. The showers will linger longest over the mountains where they likely won't end until Thursday morning.....**AVIATION...Deserts.**..A few light showers are possible through 06Z Thursday, mainly over the high desert. **SW to W winds will increase after 22Z with sfc gusts 30-40 KT along the desert mountain slopes and into the deserts.** MOD-STG UDDFS and LLWS possible over and NE/E of the mountains this afternoon and evening. Winds will gradually decrease after 04/06Z.	**88**
Special Weather Statement	10/3/2018	1121	MST	Phoenix	For Yuma County....At 1120 AM MST, Doppler radar was tracking a strong thunderstorm near Fortuna Foothills, moving north at 20 mph. Winds in excess of 40 mph will be possible with this storm.	**90**
Special Weather Statement	10/3/2018	1231	MST	Phoenix	For Yuma County....Doppler radar was tracking a strong thunderstorm 10 miles southeast of Somerton, moving northeast at 10 mph.	**91**
Area Forecast Discussion	10/3/2018	1402	MST	Phoenix	Abnormally high moisture remains in place across most of Arizona, resulting in widespread and low-based cumulus...The area of enhanced low-level convergence is focused just east of the lower Colorado River, and suspect that this area could potentially see shower and thunderstorm development for the next few hours.	**92**
Special Weather Statement	10/3/2018	1409	MST	Phoenix	For Yuma county...At 209 PM MST, Doppler radar was tracking a strong thunderstorm 11 miles south of Wellton, or 20 miles southeast of Fortuna Foothills, moving northeast at 15 mph.	**95**
Special Weather Statement	10/3/2018	1536	MST	Phoenix	...**SIGNIFICANT WEATHER ADVISORY FOR NORTHWESTERN IMPERIAL COUNTY UNTIL 415 PM PDTAt 335 PM PDT**, Doppler radar was tracking a strong thunderstorm 13 miles northwest of Plaster City, moving north at 28 mph. Half inch hail and wind gusts up to 50 mph will be possible with this storm	**96**
Special Weather Statement	10/3/2018	1626	MST	Phoenix	At 426 PM PDT, Doppler radar was tracking a strong thunderstorm 11 miles south of Joshua Tree, or 16 miles north of Indio, moving northeast at 30 mph.	**97**
Severe Thunderstorm Warning	10/3/2018	1747	MST	Phoenix	Severe Thunderstorm Warning for San Bernardino County in southern California, Riverside County in southern California...HAZARD...60 mph wind gusts and penny size hail.	**98**
Special Weather Statement	10/3/2018	1751	MST	Phoenix	**SIGNIFICANT WEATHER ADVISORY FOR NORTHWESTERN IMPERIAL COUNTY UNTIL 630 PM PDT.**..At 550 PM PDT, Doppler radar was tracking a strong thunderstorm **near Westmorland,** or near Brawley, moving northeast at 30 mph. Half inch hail and wind gusts up to 50 mph will be possible with this storm. Locations impacted include...Brawley, Westmorland, Calipatria, Niland and Wiest.	**99**
Special Weather Statement	10/3/2018	1754	MST	Phoenix	For San Bernardino and Riverside Counties...At 553 PM PDT, Doppler radar was tracking a strong thunderstorm near Midland, or 32 miles northeast of Desert Center, moving north at 32 mph. Half inch hail and wind gusts up to 50 mph will be possible with this storm.	**100**

Severe Thunderstorm Warning	10/3/2018	1818	MST	Phoenix	The National Weather Service in Phoenix has issued a * **Severe Thunderstorm Warning** for...Northwestern Imperial County in southeastern California...Riverside County in southern California... * Until 645 PM PDT. * At 618 PM PDT, a severe thunderstorm was located 10 miles southeast of Bombay Beach, **or 17 miles north of Brawley,** moving north at 30 mph. HAZARD...60 mph wind gusts and penny size hail. SOURCE...Radar indicated. IMPACT...Expect damage to roofs, siding, and trees. * Locations impacted include...Bombay Beach, Calipatria, Slab City, Niland and Imperial Hot Mineral Springs. * This includes CA Route 111 between mile markers 26 and 59.	**101**
Severe Thunderstorm Warning	10/3/2018	1839	MST	Phoenix	Severe Thunderstorm Warning for...North central Imperial County in southeastern California...Riverside County in southern California..At 639 PM PDT, a severe thunderstorm was located 8 miles northeast of Bombay Beach, or 15 miles south of Chiriaco Summit, moving north at 55 mph. HAZARD...60 mph wind gusts and quarter size hail. SOURCE...Radar indicated. IMPACT...Hail damage to vehicles is expected. Expect wind damage to roofs, siding, and trees.	**102**
Severe Weather Statement	10/3/2018	1842	MST	Phoenix	Imperial CA-Riverside CA- **...THE SEVERE THUNDERSTORM WARNING FOR NORTHWESTERN IMPERIAL AND** **RIVERSIDE COUNTIES WILL EXPIRE AT 645 PM PDT...**The severe thunderstorm which prompted the warning has been replaced by an updated severe thunderstorm warning. Therefore, the original warning will be allowed to expire. However small hail, gusty winds and heavy rain are still possible with this thunderstorm.	**103**
Severe Weather Statement	10/3/2018	1928	MST	Phoenix	At 727 PM PDT, a severe thunderstorm was located 16 miles north of Eagle Mtn, or 26 miles north of Desert Center, moving north at 35 mph. HAZARD...60 mph wind gusts and quarter size hail.	**104**
Special Weather Statement	10/3/2018	1943	MST	Phoenix	At 742 PM PDT, Doppler radar was tracking a strong thunderstorm 12 miles south of Desert Center, moving northeast at 35 mph. Half inch hail and wind gusts of 50 to 55 mph will be possible with this storm.	**105**
Severe Weather Statement	10/3/2018	2003	MST	Phoenix	At 803 PM PDT, a severe thunderstorm was located 12 miles south of Twentynine Palms Airport, or 17 miles southeast of Twentynine Palms, moving north at 35 mph. HAZARD...60 mph wind gusts and quarter size hail.	**106**
Special Weather Statement	10/3/2018	2032	MST	Phoenix	Doppler radar was tracking a strong thunderstorm 13 miles west of Palo Verde, or 36 miles southeast of Desert Center, moving northeast at 30 mph. Half inch hail and wind gusts up to 50 mph will be possible with this storm. Locations impacted include...Blythe, Nicholls Warm Springs, Cibola, Palo Verde, Midland, Blythe Airport and Ripley.	**107**
Special Weather Statement	10/3/2018	2117	MST	Phoenix	Doppler radar was tracking a strong thunderstorm over Midland, or 33 miles east of Desert Center, moving northeast at 15 mph. Half inch hail and wind gusts up to 50 mph will be possible with this storm. Locations impacted include...Blythe, Nicholls Warm Springs, Cibola, Palo Verde, Midland, Blythe Airport, Ripley, East Blythe and Ehrenberg.	**108**
Area Forecast Discussion	10/3/2018	2130	PDT	San Diego	...The risk for thunderstorms has also declined with the loss of heating but cannot rule out a rogue thunderstorm overnight in this environment...	**109**
Southwestern California Temperature and Precipitation Summary	10/4/2018	0530	PDT	San Diego	PRECIPITATION FOR THE PAST 24 HOURS INDIO -21 : 91 / 71 / 0.17 / BLYTHE 397 : 94 / 70 / 0.06 / EL CARISO 2730 : 77 / 56 / 0.10 /	**111**

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FXUS66 KSGX 010440
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
930 PM PDT Sun Sep 30 2018

.SYNOPSIS...
Weakening tropical cyclone Rosa is expected to move across northern Baja Monday and Arizona Monday night and Tuesday. This will bring moisture over southern California which will combine with some instability to produce scattered showers and isolated thunderstorms through Tuesday, mainly in the mountains and deserts. A separate Pacific storm system will bring a good chance of showers and isolated thunderstorms Wednesday and cooler weather. Dry and a little warmer weather will return Thursday and continue through next weekend.

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.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...

Some thunderstorms occurred late this afternoon and early this evening over the far southern San Bernardino Mountains, including near Forest Falls and over the southern Coachella Valley, along with a few other isolated showers. Precipitation has ended for now, though showers over northern Baja could move into mainly southern and eastern San Diego County later tonight. Moisture will be abundant below about 500 MB Monday, which will allow for another chance of showers and thunderstorms, with best chances over the mountains and deserts.

From previous discussion...

.SHORT TERM (Monday through Tuesday)...

The bulk of the moisture associated with Rosa will move into Arizona Monday-Monday night. SoCal will be on the western periphery with scattered to numerous showers, and possibly a thunderstorm, focused over the eastern San Bernardinos to the San Jacinto-Idyllwild area extending south to the San Diego County mountains as well as the deserts (especially lower). Rainfall amounts across these mountain areas are forecast to reach 0.50-1.0 inches. Near a quarter of an inch on average for the deserts. Less than a tenth of an inch west of the mountains. Confidence is too low to issue a flash flood watch for the Cranston Fire burn scar. There will be extensive cloud cover and this will inhibit full instability from being realized and should limit rainfall intensity below thresholds for all burn scar locales through Tuesday.

October 3, 2018 Exceptional Event, Imperial County **Appendix A**

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.LONG TERM (Wednesday through Saturday)...
A slow moving closed low pressure system off the California coast early Wednesday is expected to move inland across southern California Wednesday and Wednesday night. The latest 12Z model runs still show some timing differences with the GFS on the faster end of the guidance and the ECMWF on the slower end. However, both models bring the brunt of the rainfall with this system from the coast, valleys to the coastal mountain slopes during the Wednesday afternoon-evening period. GFS has trended weaker with the bulk of the rain occurring west of our area. However, the ECMWF shows more and is slower, keeping rain around through the night on Wednesday. Given the cold air aloft with the system, isolated thunderstorms are also possible with the front.

Rainfall amounts are forecast to range from 0.50-1.0 inch along the coastal slopes of the San Bernardinos, around a half an inch from Orange County to the Inland Empire to a quarter of an inch or less further south to San Diego. Less than a tenth of an inch for the lower deserts, but slightly more for the high deserts. We will trend these numbers up or down in time, depending on the evolution of this system.

The Pacific storm system will weaken and move inland by Thursday with weaker low pressure troughing for Thursday and Friday across the southwest states with drying and slow warming. For next weekend, strong high pressure will develop over the eastern Pacific along 140-145W with a highly amplified low pressure system developing downstream across the western states. There remain some differences among the global models with the placement of the trough axis. For those that are a little farther east, this trough should be dry for Southern California. For those a little farther west, there could be enough of an over water trajectory to bring some showers along and west of the mountains for late Saturday and Sunday. The current forecast is kept dry for now.

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.AVIATION...
010335Z...Patchy marine low clouds over the coastal areas and locally inland late tonight into Monday morning with bases near 1500 feet MSL and tops to around 2000 feet MSL, otherwise SCT-BKN clouds at or abv 12000 feet. The risk of cigs blo 3000 ft MSL at TAF sites is very low through Monday.

San Bernardino County Mountains/Deserts...Areas of south to southwest winds 25-35KT over the ridges and on the desert slopes with moderate up/downdrafts through Monday.

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.MARINE...
Isolated thunderstorms are possible later on Wednesday. Otherwise,

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no hazardous marine weather is expected through Thursday.

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.BEACHES...
South swells from Tropical Cyclone Rosa will increase overnight and
peak on Monday between 8 and 10 FT before subsiding on Tuesday.
Elevated surf will affect most beaches with the largest surf on
south facing beaches of Orange and far northern San Diego Counties.
Surf of 5-8 FT, with biggest sets 9-10 FT will likely impact these
areas tonight through Monday. Expect strong rip and long shore
currents to impact all beaches.



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.SKYWARN...
Skywarn activation is not requested. However weather spotters are
encouraged to report significant weather conditions.

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.SGX WATCHES/WARNINGS/ADVISORIES...
CA...High Surf Advisory until 6 AM PDT Tuesday for Orange County
     Coastal Areas.

     Beach Hazards Statement through late Monday night for San Diego
     County Coastal Areas.

PZ...NONE.
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PUBLIC...Maxwell/Gregoria
AVIATION/MARINE/BEACHES...PG
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211
FXUS65 KPSR 010501
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
1001 PM MST Sun Sep 30 2018

.UPDATE...
Updated aviation discussion.

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.SYNOPSIS...
Scattered to numerous showers and thunderstorms at times can be expected into Wednesday. This will cause localized flash flooding. For most areas, the most significant rainfall is expected to occur Monday night through Tuesday night. Meanwhile, high temperatures will drop into the 80s beginning Monday. Subsequent weaker weather systems will move through the western states during the latter half of the week but with much lower chances of rain.

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.DISCUSSION...
Phase one of this multiday weather event started several hours early with very strong storms over Yuma County already having occurred as of this writing. At the time the storms first started, one of the few models that had it forecasted was the UofA WRF-GFS which is often on the aggressive end of the spectrum of the hi-res models. However, other hi-res models were also indicating considerable shower activity (if not strong convection) for later on over much of southwest Arizona into western Maricopa County. This prompted a revision of the Flash Flood Watch to start it right away in that area. This is being driven not only by a preliminary push of moisture but also one or more perturbations/PV anomalies ahead of Rosa. The trend of more significant rainfall also affecting areas east of there tonight has model support (plus ongoing convection may provide additional lift). Thus, it was decided to start the Watch early for all of our Arizona zones. Southeast CA (except for the Lower Colorado River Valley) remains unchanged as it looks like the more robust precip will remain just east of there until later Monday. As for Rosa, the latest NHC Advisory has it as barely a Cat 1. It will continue to weaken and by late Tuesday morning will be only a tropical depression centered just southeast of Yuma. 24 hrs after that, it will be only a remnant low centered near Page.

After this afternoon and tonight, anticipate something of a lull during the daytime Monday before the arrival of the rainfall directly caused by the Rosa circulation on Monday night through Tuesday night. This remains largely unchanged. One thing that has changed is an increase in the storm total QPF due to activity

today/tonight but also model trends for late Monday night and Tuesday morning. This is most noticeable over western Maricopa County, Yuma County, and La Paz County, as well as far northern Maricopa County.

On Wednesday, the large upper low to our west will start to move inland, supplying enough forcing to result in scattered instability showers over much of the Arizona deserts, with isolated showers into far southeast California. The low will open up and race east across the area Wednesday night into Thursday and as it passes, rain chances will steadily diminish; expect just a few lingering showers or storms over the higher terrain east of Phoenix by Thursday afternoon.

On Friday a large and broad upper trof is forecast to develop across the western CONUS and southern Arizona will be on the far southern periphery of the low and under rather dry westerly flow aloft. Expect cool but rather dry conditions area wide Friday with deserts highs hovering near 90 and several degrees below seasonal normals. There is some uncertainty as to how the large trof will develop over the weekend, but we will likely see conditions becoming unsettled with at least isolated showers developing Saturday especially north and east of Phoenix. It will remain cool with central desert highs mostly in the 80s.

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.AVIATION...
South-Central Arizona including KPHX, KIWA, and KSDL:

Widespread light to moderate rain showers are currently ongoing at all Phoenix TAF sites as west-southwest winds will persist for the next few hours. We removed thunderstorms from the TAFs for this evening as area soundings are still not moist enough at lower and midlevels to tap into elevated instability aloft. We may see a brief lull in shower activity with only vicinity or light showers during the early overnight hours before an uptick in shower activity is expected after 10Z. VCTS has been added for the first few hours of this period to account for the possibility of lightning that may occur with lingering instability aloft, but showers should generally prevail for the rest of the morning and afternoon hours. Ceilings should remain above 4 kft through at least 06Z, but we still expect IFR-MVFR ceilings to develop between 06-12Z on Tuesday as heavier shower activity pushes into the terminals as Rosa's remnants move across the Phoenix metro.

Outlook for Tuesday: A prolonged period of higher impact weather will affect KPHX during the early morning hours through early afternoon on Tuesday. Widespread showers causing moderate to heavy rain at times will reduce visibilities and cause at least IFR- MVFR ceilings for a 6-12 hour period. The worst conditions currently are most likely to occur around the Tuesday morning push to seriously impact operations.

Southeast California/Southwest Arizona including KIPL and KBLH:

Thunderstorms that impacted KIPL and KBLH earlier this afternoon and evening have dissipated with only isolated shower and thunderstorm activity in Riverside and western Imperial Counties. There is an outside shot at another shower or thunderstorm at KBLH between 05-07Z tonight as a weak outflow from the east is helping new cells develop, but we will amend if necessary. Otherwise, only isolated showers are expected until around 17Z when shower and possibly isolated thunderstorm activity should pick back up. Shower activity is expected to continue tomorrow evening into the overnight hours as Rosa's remnants push just to the east, but

there remains uncertainty on how much coverage there will be over southeast California and how intense it will be. For now, we have just included light showers after 22Z with highest confidence at KBLH considering Rosa's rainfall should rapidly taper off on its west side. Southeasterly 10-20 winds will be preferred tomorrow afternoon as Rosa's remnants approach and ceilings should generally remain above 5 kft through tomorrow evening.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...
Wednesday through Sunday...
Lingering rain chances continue across the forecast area Wednesday into Thursday morning...but with much lighter accumulations. On Friday and Saturday, there will be only slight chances confined to south-central AZ before chances expand westward into southeast California Sunday. Below normal high temperatures will persist this week. Unusually high humidity levels Wednesday will decline through Friday before leveling off. Despite the drying trend, humidities will remain above 15%. In fact, most lower deserts will remain above 20%. Overnight recovery will remain at least good. Winds will generally be light with more noticeable breeziness by Sunday.

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.SPOTTER INFORMATION STATEMENT...
Spotters should follow standard reporting procedures.

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.PSR WATCHES/WARNINGS/ADVISORIES...
AZ...Flash Flood Watch through late Tuesday night for AZZ530>563.

CA...Flash Flood Watch through late Tuesday night for CAZ569.

Flash Flood Watch from Monday morning through late Tuesday night for CAZ560>568-570.

October 3, 2018 Exceptional Event, Imperial County **Appendix A**

985
FXUS66 KSGX 011014
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
312 AM PDT Mon Oct 1 2018

.SYNOPSIS...
Weakening Tropical Cyclone Rosa is moving across northern Baja today, carrying a load of tropical moisture with it. Some of this is moving over SoCal and will contribute to an unstable atmosphere with the threat of scattered showers and a few thunderstorms, most numerous over the mountains and deserts through tonight. It will be quite warm and humid today, then a bit cooler on Tuesday. Moisture will linger through Wednesday with scattered showers and an isolated thunderstorm possible ahead of a Pacific trough, which could ignite another round of showers and thunderstorms later Wednesday from west to east. Cooler into Wednesday, then a little warmer into the weekend.

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.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...

Low, marine clouds were nowhere to be found in advance of T.S. Rosa, which will make landfall later today some 260 miles SSE of San Diego in northern Baja CA. The higher clouds rotating around the system cover the SE half of the forecast area, and rain is falling farther SE across parts of Imperial County and areas south of the International Border. Surface pressure gradients (KSAN to the deserts) are weak and winds are light. Surface dewpoints have risen well into the 60s and lower 70s across the region and will keep overnight lows elevated again tomorrow night.

A trough over the EastPac and a ridge over the eastern Conus has SoCal in a SW flow aloft which is steering Rosa well inland. The trough over EastPac will continue to deepen through early Wed as it moves toward the CA Coast. The pattern will keep us in higher than average humidity through Wednesday, which will contribute to potentially heavy rainfall rates/amounts in scattered shwrs/tstms at times. Initially the concern is for the higher mountains and deserts where a Flash Flood Watch has been posted for this afternoon through late tonight. The latest Cansac/MM5/WRFEMS runs all depict heavy rainfall cores in these areas over the next 24 hours or so. Some shwrs/tstms may continue through Tuesday due to remaining moisture and instability under increasing SW flow aloft, but should be more scattered and pose less of a Flash Flood threat.

The trough off the Coast has been handled fairly consistently of late with the medium range guidance. They show a large cut-off forming off the NoCal Coast and dropping south offshore as energy

parcels swing around it. The final vort packet swings around the low, driving the system inland late Wednesday and weakening it rapidly as it moves east toward Las Vegas. This track keeps the heaviest rain potential to the north of the forecast area, but it still looks like sufficient dynamics and instability could bring a band of showers and isolated thunderstorms to the Coast and inland Wed afternoon into Wed night. Behind the trough, a dry NW flow ensues for mild and dry conditions into the weekend. Coolest day will be Wednesday, followed by warming into the weekend.

HYDROLOGY...
The main concerns will continue to be the potential for flash flooding through Wednesday night. Initially the eastern part of the

forecast area has the greatest potential as deep tropical moisture from Rosa makes it's way northward, and easterly flow from the weakening sfc circulation provides upslope flow onto the desert slopes. This, in combination with a weak deformation zone aloft has our high resolution models creating cores of heavy precipitation development along and east of the mountain crests today and tonight.

The second area of concern comes later Wednesday as the cut-off off the coast opens up and charges inland. Models show high PW values being drawn into it from the subtropical Pacific. If that isn't enough, lingering moisture from Rosa will add fuel to any potential showers and thunderstorms that develop, so this creates the next potential for pockets of heavy rainfall from the Coast, inland. Curiously, the 00Z GFS/NAM and consequently the local WRFEMS fail to develop any significant precip here, so there remains considerable uncertainty just how it will play out here, but the pattern and high PW suggest otherwise.

Rainfall amounts have been adjusted upward for eastern portions of the forecast area with the latest guidance. One to three inches amounts are possible, especially over our higher mountains, draining onto the desert slopes. While this rain is needed, it may be too much all at once. Farther to the east, a few cells could fire over the Valleys including the I.E. but it is not a classic pattern so this activity is expected to be limited.

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.AVIATION...
010900Z...Coastal low clouds (CIGS) are not expected today and tonight. Scattered to broken clouds 6000-8000 feet are expected, mostly south and east of Orange County. Sprinkles or light showers are possible in this region. Thunderstorms are possible through tonight across all inland areas and even slightly so in southern coastal San Diego County, but confidence is low at KSAN. Any thunderstorms could produce gusty erratic winds and heavy showers briefly reducing vis. Bases would be around 7000 feet msl with tops as high as 35000 feet.

&&

October 3, 2018 Exceptional Event, Imperial County

Appendix A

.MARINE...
Isolated thunderstorms are possible near San Diego today and tonight, and again across all coastal waters Wednesday afternoon and evening. Any thunderstorm would produce lightning and could produce gusty, erratic winds. Otherwise, no hazardous marine weather is expected through Friday.

&&

.BEACHES...
South swell from Tropical Cyclone Rosa will peak today producing high surf that will be highest on south facing beaches. Strong currents will occur at all beaches. The swell and surf will diminish tonight and Tuesday. See the high surf advisory and surf forecast for details.

&&

.SKYWARN...
Skywarn activation may be needed today due to the Flash Flood threat this afternoon into tonight.

&&

.SGX WATCHES/WARNINGS/ADVISORIES...
CA...Flash Flood Watch through this evening for Apple and Lucerne Valleys-Coachella Valley-Riverside County Mountains-San Bernardino County Mountains-San Diego County Deserts-San Diego County Mountains-San Gorgonio Pass Near Banning.

Beach Hazards Statement through late tonight for San Diego County Coastal Areas.

High Surf Advisory until 6 AM PDT Tuesday for Orange County Coastal Areas.

PZ...NONE.

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PUBLIC/HYDROLOGY...10
AVIATION/MARINE/BEACHES...MM

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College of Ag

783
FXUS66 KSGX 011702
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
1002 AM PDT Mon Oct 1 2018

.SYNOPSIS...
Weakening Rosa is moving across northern Baja today, carrying copious tropical moisture with it. Some of this is moving over SoCal and will contribute to an unstable atmosphere with the threat of scattered showers and a few thunderstorms, most numerous over the mountains and deserts through tonight. It will be quite warm and humid today, then a bit cooler on Tuesday. Moisture will linger through Wednesday with scattered showers and an isolated thunderstorm possible ahead of a Pacific trough, which could ignite another round of showers and thunderstorms later Wednesday from west to east. Cooler into Wednesday, then a little warmer into the weekend.

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.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...

...Update...

The morning Miramar/San Diego sounding registered Precipitable Water (PW) at 1.60 inches. This is near the maximum recorded on this date (1.71"). This is moisture from Rosa which has been increasing across SoCal since yesterday. This high moisture will set the stage for a monsoonal type patter today with showers and thunderstorms developing over the mountains and deserts where the highest moisture and convergence will exist. 1-3 inches of rain and flash flooding, including debris flows at the Cranston burn scar, is possible. A Flash Flood Watch is in effect for the mountains and deserts noon today through midnight tonight. West of the mountains, a few showers are possible with decreasing chances towards the coast and much, if not all, of the major metropolitan areas will not receive rainfall from Rosa's moisture today/tonight. No changes to the forecast were made this morning. See previous discussion below for further forecast details.

...Previous Discussion (Issued at 312 AM PDT Mon Oct 1 2018)...

Low, marine clouds were nowhere to be found in advance of T.S. Rosa, which will make landfall later today some 260 miles SSE of San Diego in northern Baja CA. The higher clouds rotating around the system cover the SE half of the forecast area, and rain is falling farther SE across parts of Imperial County and areas south of the

International Border. Surface pressure gradients (KSAN to the deserts) are weak and winds are light. Surface dewpoints have risen well into the 60s and lower 70s across the region and will keep overnight lows elevated again tomorrow night.

A trough over the EastPac and a ridge over the eastern Conus has SoCal in a SW flow aloft which is steering Rosa well inland. The trough over EastPac will continue to deepen through early Wed as it moves toward the CA Coast. The pattern will keep us in higher than average humidity through Wednesday, which will contribute to potentially heavy rainfall rates/amounts in scattered shwrs/tstms at times. Initially the concern is for the higher mountains and deserts where a Flash Flood Watch has been posted for this afternoon through late tonight. The latest Cansac/MM5/WRFEMS runs all depict heavy rainfall cores in these areas over the next 24 hours or so. Some shwrs/tstms may continue through Tuesday due to remaining moisture and instability under increasing SW flow aloft, but should be more scattered and pose less of a Flash Flood threat.

The trough off the Coast has been handled fairly consistently of late with the medium range guidance. They show a large cut-off forming off the NoCal Coast and dropping south offshore as energy parcels swing around it. The final vort packet swings around the low, driving the system inland late Wednesday and weakening it rapidly as it moves east toward Las Vegas. This track keeps the heaviest rain potential to the north of the forecast area, but it still looks like sufficient dynamics and instability could bring a band of showers and isolated thunderstorms to the Coast and inland Wed afternoon into Wed night. Behind the trough, a dry NW flow ensues for mild and dry conditions into the weekend. Coolest day will be Wednesday, followed by warming into the weekend.

HYDROLOGY...
The main concerns will continue to be the potential for flash flooding through Wednesday night. Initially the eastern part of the forecast area has the greatest potential as deep tropical moisture from Rosa makes it's way northward, and easterly flow from the weakening sfc circulation provides upslope flow onto the desert slopes. This, in combination with a weak deformation zone aloft has our high resolution models creating cores of heavy precipitation development along and east of the mountain crests today and tonight.

The second area of concern comes later Wednesday as the cut-off off the coast opens up and charges inland. Models show high PW values being drawn into it from the subtropical Pacific. If that isn't enough, lingering moisture from Rosa will add fuel to any potential showers and thunderstorms that develop, so this creates the next potential for pockets of heavy rainfall from the Coast, inland. Curiously, the 00Z GFS/NAM and consequently the local WRFEMS fail to develop any significant precip here, so there remains considerable uncertainty just how it will play out here, but the pattern and high PW suggest otherwise.

Rainfall amounts have been adjusted upward for eastern portions of

the forecast area with the latest guidance. One to three inches amounts are possible, especially over our higher mountains, draining onto the desert slopes. While this rain is needed, it may be too much all at once. Farther to the east, a few cells could fire over the Valleys including the I.E. but it is not a classic pattern so this activity is expected to be limited.

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.AVIATION...
011545Z...Coastal low clouds are not expected tonight or tomorrow morning. Scattered to broken clouds 6000-8000 feet are expected today, mostly south and east of Orange County. Some sprinkles or light showers are possible in those areas. Thunderstorms are possible through tonight across the mountains (excluding the Santa Ana Mountains) and in the deserts. Slight chance of thunderstorms in southern coastal San Diego County, but confidence is low at KSAN. Any thunderstorms could produce gusty erratic winds and heavy showers briefly reducing visibility. Bases would be around 7000 feet MSL with tops as high as 35000 feet MSL.

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.MARINE...
Isolated thunderstorms are possible near San Diego today and tonight, and again across all coastal waters Wednesday afternoon and evening. Any thunderstorm would produce lightning and could produce gusty, erratic winds. Otherwise, no hazardous marine weather is expected through Friday.

&&

.BEACHES...
South swell from Tropical Cyclone Rosa will peak today producing high surf that will be highest on south facing beaches. Strong currents will occur at all beaches. The swell and surf will diminish tonight and Tuesday. See the high surf advisory and surf forecast for details.

&&

.SKYWARN...
Skywarn activation may be needed today due to the Flash Flood threat this afternoon into tonight.

&&

.SGX WATCHES/WARNINGS/ADVISORIES...
CA...Flash Flood Watch through this evening for Apple and Lucerne Valleys-Coachella Valley-Riverside County Mountains-San Bernardino County Mountains-San Diego County Deserts-San Diego County Mountains-San Gorgonio Pass Near Banning.

156
FXUS65 KPSR 011939
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
1239 PM MST Mon Oct 1 2018

.UPDATE...
Updated 18Z aviation discussion.

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.SYNOPSIS...
Widespread showers and isolated embedded thunderstorms at times can be expected into Wednesday. This will cause localized flash flooding. For most areas, the most significant rainfall is expected to occur tonight through Tuesday night. Meanwhile, high temperatures will drop into the 80s beginning today. Subsequent weaker weather systems will move through the western states during the latter half of the week but with much lower chances of rain.

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.DISCUSSION...
The start of the long awaited heavy rainfall event has begun, as deep tropical moisture associated with former hurricane Rosa continued to pour into far southeast California and Arizona. Radar at 2 am showed widespread showers spreading north across the area, with the most significant showers located from the lower Colorado River valley eastward into southern Gila County. Currently Rosa is a tropical storm and is located off the central coast of Baja California, and she is being steered towards the north northwest ahead of a large upper low that is steadily approaching the California coast. Early this morning we will see widespread showers with rain totals in the heavier areas approaching or even exceeding one quarter of an inch. During the day today, as Rosa's dissipating circulation center nears the northern Baja coast, showers will continue to be rather widespread but for the most part will be on the lighter side, due in part to still weak upper forcing (most of the stronger UVV remains aloft and above 700mb during the daytime hours today). Expect cloudy skies with much cooler high temperatures today, especially given all of the rain cooled air in the area; Phoenix will only climb to about 84 degrees today.

It should be mentioned that forecast confidence in this tropical heavy rain event continues to be very high. Model consistency, including various ensemble packages, has been excellent with respect to the track of Rosa's dissipating circulation center for the past few days and model timing issues have been nearly resolved with respect to how quickly the remnants of Rosa and the associated open wave will move through Arizona. By 5 am Tuesday, Rosa will be moving north-northeast out of the far northern Gulf of California and into

southwest Arizona, and should be moving into central Arizona by Tuesday afternoon. The track of Rosa will be through west-central Arizona, a bit west of Phoenix, and the heaviest rainfall will likely occur from later this evening through mid morning on Tuesday. Many of the lower deserts could see rain totals in excess of one half inch from midnight tonight through rush hour Tuesday, and heavier amounts are likely - especially if any embedded thunderstorms occur overnight. Overall, storm total rainfall amounts remain on track, with the western and central deserts likely to see 1-2 inches before it is all over, with higher amounts rising to between 3 and 4 inches. Many of the heavier amounts will likely be focused over favorable upslope areas to the north and northeast of Phoenix. The heavy rains will likely lead to episodes of flooding

and flash flooding, especially this evening through Tuesday morning, and the Flash Flood Watch remains in effect for Arizona through 5 am Wednesday. Although Rosa's remnants will be moving northeast and away from central Arizona/Phoenix Tuesday night there will still be heavy rain/flooding issues, as we will be seeing dynamics increasing ahead of the low off the California coast and those dynamics will be acting on considerable lingering low/mid level moisture. POPs in the central deserts are near 100 percent tonight and Tuesday and will still be likely to nearly categorical Tuesday night.

Wednesday and Wednesday night will still be quite unsettled, as the upper trof to our west moves inland and across the area during this time; expect scattered to numerous showers and isolated thunderstorms Wednesday, decreasing a bit from the west overnight as the low progresses east and into eastern Arizona. Drier and more subsident west/southwest flow aloft will overspread the area Thursday behind the exiting low and by Thursday afternoon we will see just a few lingering instability showers/storms mainly over higher terrain areas to the east of Phoenix. High temperatures Wednesday and Thursday will stay well below seasonal normals due to the cooler airmass ushered into the area with the passing low.

For Friday into the weekend, operational GFS and ECMWF are actually in pretty good agreement that a large upper trof will gradually develop across the western CONUS leading to more unsettled conditions across south central Arizona as well as continued cooler high temperatures. Friday should be a dry mostly sunny day as southern Arizona will be on the southern periphery of the developing trof and under dry westerly flow aloft. As the trof deepens over the weekend, disturbances moving through the trof will bring some moisture to eastern Arizona and increasing QG forcing mainly to south-central Arizona. As such we have an increasing POP trend Saturday into Sunday with most of the precip chances expected from Phoenix north and east. High temperatures on Sunday will lower with Phoenix dropping into the low to mid 80s.

&&

.AVIATION...
South-Central Arizona including KPHX, KIWA, and KSDL:

Light to moderate rain will begin at the Phoenix sites early this afternoon with a brief lull from around 00-04Z. Winds should generally remain below 10 knots through early evening, but they will be quite variable. A N-NE wind shift is expected around 00Z ahead of Rosa's remnant circulation, but models differ on whether winds will briefly veer to the west or remain easterly before veering to the north. There is observational evidence for both, so we have maintained easterly for now and will amend as necessary. Ceilings should generally remain above 4 kft with some scattered 2-3 kft ceilings, but brief periods of MVFR ceilings and visibilities will be possible with any heavier showers that occur.

Significant impacts are expected after 04-05Z as more widespread

showers and possibly even a few thunderstorms affect the Phoenix sites through late tomorrow morning or afternoon. Moderate to heavy rain will cause at least MVFR ceilings and visibilities and possibly intermittent IFR conditions with greatest impacts expected overnight and possibly during the morning push. Phoenix will be along the eastern edge of the storm where there may be enough instability to support isolated embedded thunderstorms. For now, we have just added VCTS to KIWA where this appears most likely, but this may need to be added to other sites with future TAF cycles. Winds will generally be SE at 10-15 knots overnight and tomorrow morning with brief stronger gusts exceeding 25 knots in heavier showers and thunderstorms. Conditions should rapidly improve to VFR tomorrow afternoon as winds become more S-SW and drier air moves in, but lingering showers and thunderstorms will be possible through at least the afternoon hours.

Southeast California/Southwest Arizona including KIPL and KBLH:

Isolated to scattered showers with possibly a thunderstorm or two are expected this afternoon to move from east to west as Rosa's remnants continue to move to the northeast. We have maintained VCTS for 21-00Z for KBLH where chances appear to be better for thunderstorms, but are still relatively low. Light to moderate shower activity should pick up after 00Z for a few hours at KIPL and several hours at KBLH which will be closer to the Rosa's remnant circulation. Ceilings and visibilities should generally remain above 5 kft, but a brief period of MVFR conditions will be possible with any brief periods of heavy rain. Southeast winds will generally be preferred until Rosa approaches, with northerly winds expected at KBLH after about 03Z. Shower activity should end overnight at KIPL and around sunrise at KBLH, with just VCSH expected at KBLH afterwards with southerly flow returning.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...
Wednesday through Sunday...
Lingering rain chances continue across the forecast area Wednesday into Thursday morning, but with much lighter accumulations. On

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Friday and Saturday, there will be only slight chances confined to
south-central AZ before chances expand westward into southeast
California Sunday. Below normal high temperatures will persist this
week. Unusually high humidity levels Wednesday will decline through
Friday before leveling off. Despite the drying trend, humidities
will remain above 15%. In fact, most lower deserts will remain above
20%. Overnight recovery will remain at least good. Winds will
generally be light with more noticeable breeziness by Sunday.

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.SPOTTER INFORMATION STATEMENT...
Spotters should follow standard reporting procedures.


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.PSR WATCHES/WARNINGS/ADVISORIES...
AZ...Flash Flood Watch through late Tuesday night for AZZ530>563.

CA...Flash Flood Watch through late Tuesday night for CAZ560>570.

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DISCUSSION...CB
AVIATION...Hopper
FIRE WEATHER...AJ/MO
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337
FXUS65 KPSR 012115
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
215 PM MST Mon Oct 1 2018

.SYNOPSIS...
Showers and isolated embedded thunderstorms are expected to slowly ramp up the day progresses, peaking on Tuesday morning, and then trending down Tuesday night. It is expected there will be widespread nuisance flooding with a high potential for more serious, localized flooding. Most places will be dry Thursday and Friday before more minor rain chances return over the weekend.

&&

.DISCUSSION...
Tropical Storm Rosa was centered just to the west-northwest of the Baja Spur early this afternoon. The NHC forecast track remains largely unchanged from what it has been for the past few days. The path brings the lower level circulation roughly along a line from Rocky Point, Mexico (5 am Tuesday) to Page, AZ (5 am Wednesday). The intensity drops to a depression by 5 am Tue with further weakening to a remnant low by Tuesday night. The upper portion of the system is already running ahead of the lower level circulation indicative of the ongoing shearing/weakening. With such weakening, winds with the circulation are not a major concern. Anticipate just breezy to windy conditions Tuesday. The real concern of course continues to be the excessive rainfall and associated flooding potential.

The axis of heaviest rain accumulation through Tuesday night is eastern Yuma County, eastern La Paz, western Pima, northern and western Maricopa, and areas north and east of there - especially Yavapai County. There is a tighter gradient on both the east and west sides of that corridor. The Flash Flood Watch remains in effect but the flooding potential over southeast California is not as robust as areas east of there given the latest trends. Too early to cancel for there since more isolated, but very heavy, showers are still possible.

Looking at some of the near term temporal details...after a general lull this afternoon and part of the evening (apart from some more localized showers), the main batch of rain moves in tonight and continues through the day Tuesday with a slow clearing trend from southwest to northeast on Tuesday night - except for lingering showers focused over the higher terrain of central AZ. In addition to the tropical showers which will be fully capable of producing heavy rain, there will be more isolated deeper convection (thunderstorms) where rainfall rates will be extremely

high. Flooding problems are most likely to start Tuesday morning and continue into Wednesday morning (lagging the rain).

On Wednesday and Thursday, there will be some lingering precip potential (mainly over the northern half of Arizona) in association with an upper trough and associated front and QG forcing as the system moves through western states. However, that system will weaken rapidly as it moves inland, so those lifting mechanisms weaken quickly as well. Also, as the southwesterly flow moves in behind the departing Rosa remnants, but ahead of the brunt of the trough, there will be dry advection. Thus, there will be MUCH less moisture to work with and so PoPs - and especially QPF - is dramatically. However, there will likely be some

runoff problems on Wednesday.

For Friday into the weekend, operational GFS and ECMWF are actually in pretty good agreement that a large upper trof will gradually develop across the western CONUS leading to more unsettled conditions across south central Arizona as well as continued cooler high temperatures. Friday should be a dry mostly sunny day as southern Arizona will be on the southern periphery of the developing trof and under dry westerly flow aloft. As the trof deepens over the weekend, disturbances moving through the trof will bring some moisture to eastern Arizona and increasing QG forcing mainly to south-central Arizona. As such we have an increasing POP trend Saturday into Sunday with most of the precip chances expected from Phoenix north and east. High temperatures on Sunday will lower with Phoenix dropping into the low to mid 80s.

&&

.AVIATION...
South-Central Arizona including KPHX, KIWA, and KSDL:

Light to moderate rain will begin at the Phoenix sites early this afternoon with a brief lull from around 00-04Z. Winds should generally remain below 10 knots through early evening, but they will be quite variable. A N-NE wind shift is expected around 00Z ahead of Rosa's remnant circulation, but models differ on whether winds will briefly veer to the west or remain easterly before veering to the north. There is observational evidence for both, so we have maintained easterly for now and will amend as necessary. Ceilings should generally remain above 4 kft with some scattered 2-3 kft ceilings, but brief periods of MVFR ceilings and visibilities will be possible with any heavier showers that occur.

Significant impacts are expected after 04-05Z as more widespread showers and possibly even a few thunderstorms affect the Phoenix sites through late tomorrow morning or afternoon. Moderate to heavy rain will cause at least MVFR ceilings and visibilities and possibly intermittent IFR conditions with greatest impacts expected overnight and possibly during the morning push. Phoenix will be along the eastern edge of the storm where there may be enough instability to support isolated embedded thunderstorms. For

now, we have just added VCTS to KIWA where this appears most likely, but this may need to be added to other sites with future TAF cycles. Winds will generally be SE at 10-15 knots overnight and tomorrow morning with brief stronger gusts exceeding 25 knots in heavier showers and thunderstorms. Conditions should rapidly improve to VFR tomorrow afternoon as winds become more S-SW and drier air moves in, but lingering showers and thunderstorms will be possible through at least the afternoon hours.

Southeast California/Southwest Arizona including KIPL and KBLH:

Isolated to scattered showers with possibly a thunderstorm or two are expected this afternoon to move from east to west as Rosa's remnants continue to move to the northeast. We have maintained VCTS for 21-00Z for KBLH where chances appear to be better for thunderstorms, but are still relatively low. Light to moderate shower activity should pick up after 00Z for a few hours at KIPL and several hours at KBLH which will be closer to the Rosa's remnant circulation. Ceilings and visibilities should generally remain above 5 kft, but a brief period of MVFR conditions will be possible with any brief periods of heavy rain. Southeast winds will generally be preferred until Rosa approaches, with northerly winds expected at KBLH after about 03Z. Shower activity should end overnight at KIPL and around sunrise at KBLH, with just VCSH expected at KBLH afterwards with southerly flow returning.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...
Thursday through Monday...
Most places will be dry Thursday and Friday with only very slight chances over portions of south-central AZ. Over the weekend, rain chances return but accumulations, if any, will be modest. Winds will be light through Friday before breeziness, favoring westerly directions, returns over the weekend. Humidities trend down significantly through Friday before leveling off. However, minimum humidities will remain above 20% for nearly all areas and overnight recovery will remain at least good.

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.SPOTTER INFORMATION STATEMENT...
Spotters should follow standard reporting procedures.

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.PSR WATCHES/WARNINGS/ADVISORIES...
AZ...Flash Flood Watch through late Tuesday night for AZZ530>563.

CA...Flash Flood Watch through late Tuesday night for CAZ560>570.

958
FXUS65 KPSR 020417
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
917 PM MST Mon Oct 1 2018

.SYNOPSIS...
Showers and isolated embedded thunderstorms are expected to slowly ramp up the day progresses, peaking on Tuesday morning, and then trending down Tuesday night. It is expected there will be widespread nuisance flooding with a high potential for more serious, localized flooding. Most places will be dry Thursday and Friday before more minor rain chances return over the weekend.

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.DISCUSSION...
Latest IR imagery reveals that the mid-level circulation of TC Rosa has become dominant, with colder cloud tops across the northern Gulf of California generally propagating eastward. Some higher reflectivities have developed across southern Yuma County, though the bulk of the rain so far this evening has generally been light across Arizona. Highest observed totals over the past 12 hours are across Yuma County, but are less than a quarter of an inch.

Latest HREF members as well as the HRRR are somewhat less bullish with regard to the precipitation intensity/coverage overnight as the mid-level circulation lifts northeastward and weakens. Per the latest MPD from WPC, the greatest threat for flash flooding appears to be across portions of southern Arizona. Meanwhile, the 00z PSR sounding registered a whopping, uncontaminated PWAT of 1.82 inches. There certainly remains enough moisture and support from some of the hi-res guidance to warrant the Watch further north into Maricopa and Gila counties. However, there is increasing uncertainty that some of the 1-2" rain amounts may not be as widespread. Latest trends also suggest that some of the stronger cells may actually develop Tuesday afternoon as the atmosphere destabilizes.

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.PREVIOUS DISCUSSION...
Tropical Storm Rosa was centered just to the west-northwest of the Baja Spur early this afternoon. The NHC forecast track remains largely unchanged from what it has been for the past few days. The path brings the lower level circulation roughly along a line from Rocky Point, Mexico (5 am Tuesday) to Page, AZ (5 am Wednesday). The intensity drops to a depression by 5 am Tue with further weakening to a remnant low by Tuesday night. The upper portion of the system is already running ahead of the lower level circulation indicative of the ongoing shearing/weakening. With

such weakening, winds with the circulation are not a major concern. Anticipate just breezy to windy conditions Tuesday. The real concern of course continues to be the excessive rainfall and associated flooding potential.

The axis of heaviest rain accumulation through Tuesday night is eastern Yuma County, eastern La Paz, western Pima, northern and western Maricopa, and areas north and east of there - especially Yavapai County. There is a tighter gradient on both the east and west sides of that corridor. The Flash Flood Watch remains in effect but the flooding potential over southeast California is not as robust as areas east of there given the latest trends. Too early to cancel for there since more isolated, but very heavy, showers are still possible.

Looking at some of the near term temporal details...after a general lull this afternoon and part of the evening (apart from some more localized showers), the main batch of rain moves in tonight and continues through the day Tuesday with a slow clearing trend from southwest to northeast on Tuesday night - except for lingering showers focused over the higher terrain of central AZ. In addition to the tropical showers which will be fully capable of producing heavy rain, there will be more isolated deeper convection (thunderstorms) where rainfall rates will be extremely high. Flooding problems are most likely to start Tuesday morning and continue into Wednesday morning (lagging the rain).

On Wednesday and Thursday, there will be some lingering precip potential (mainly over the northern half of Arizona) in association with an upper trough and associated front and QG forcing as the system moves through western states. However, that system will weaken rapidly as it moves inland, so those lifting mechanisms weaken quickly as well. Also, as the southwesterly flow moves in behind the departing Rosa remnants, but ahead of the brunt of the trough, there will be dry advection. Thus, there will be MUCH less moisture to work with and so PoPs - and especially QPF - is dramatically. However, there will likely be some runoff problems on Wednesday.

For Friday into the weekend, operational GFS and ECMWF are actually in pretty good agreement that a large upper trof will gradually develop across the western CONUS leading to more unsettled conditions across south central Arizona as well as continued cooler high temperatures. Friday should be a dry mostly sunny day as southern Arizona will be on the southern periphery of the developing trof and under dry westerly flow aloft. As the trof deepens over the weekend, disturbances moving through the trof will bring some moisture to eastern Arizona and increasing QG forcing mainly to south-central Arizona. As such we have an increasing POP trend Saturday into Sunday with most of the precip chances expected from Phoenix north and east. High temperatures on Sunday will lower with Phoenix dropping into the low to mid 80s.

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.AVIATION...
South-Central Arizona including KPHX, KIWA, and KSDL:

Light to moderate rain will begin at the Phoenix sites early this afternoon with a brief lull from around 00-04Z. Winds should generally remain below 10 knots through early evening, but they will be quite variable. A N-NE wind shift is expected around 00Z ahead of Rosa's remnant circulation, but models differ on whether winds will briefly veer to the west or remain easterly before veering to the north. There is observational evidence for both, so we have maintained easterly for now and will amend as necessary. Ceilings should generally remain above 4 kft with some scattered 2-3 kft ceilings, but brief periods of MVFR ceilings and visibilities will be possible with any heavier showers that occur.

Significant impacts are expected after 04-05Z as more widespread showers and possibly even a few thunderstorms affect the Phoenix sites through late tomorrow morning or afternoon. Moderate to heavy rain will cause at least MVFR ceilings and visibilities and possibly intermittent IFR conditions with greatest impacts expected overnight and possibly during the morning push. Phoenix will be along the eastern edge of the storm where there may be enough instability to support isolated embedded thunderstorms. For now, we have just added VCTS to KIWA where this appears most likely, but this may need to be added to other sites with future TAF cycles. Winds will generally be SE at 10-15 knots overnight and tomorrow morning with brief stronger gusts exceeding 25 knots in heavier showers and thunderstorms. Conditions should rapidly improve to VFR tomorrow afternoon as winds become more S-SW and drier air moves in, but lingering showers and thunderstorms will be possible through at least the afternoon hours.

Southeast California/Southwest Arizona including KIPL and KBLH:

Isolated to scattered showers with possibly a thunderstorm or two are expected this afternoon to move from east to west as Rosa's remnants continue to move to the northeast. We have maintained VCTS for 21-00Z for KBLH where chances appear to be better for thunderstorms, but are still relatively low. Light to moderate shower activity should pick up after 00Z for a few hours at KIPL and several hours at KBLH which will be closer to the Rosa's remnant circulation. Ceilings and visibilities should generally remain above 5 kft, but a brief period of MVFR conditions will be possible with any brief periods of heavy rain. Southeast winds will generally be preferred until Rosa approaches, with northerly winds expected at KBLH after about 03Z. Shower activity should end overnight at KIPL and around sunrise at KBLH, with just VCSH expected at KBLH afterwards with southerly flow returning.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...
Thursday through Monday...
Most places will be dry Thursday and Friday with only very slight
chances over portions of south-central AZ. Over the weekend, rain
chances return but accumulations, if any, will be modest. Winds
will be light through Friday before breeziness, favoring westerly
directions, returns over the weekend. Humidities trend down
significantly through Friday before leveling off. However, minimum
humidities will remain above 20% for nearly all areas and
overnight recovery will remain at least good.

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.SPOTTER INFORMATION STATEMENT...
Spotters should follow standard reporting procedures.

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.PSR WATCHES/WARNINGS/ADVISORIES...
AZ...Flash Flood Watch through late Tuesday night for AZZ530>563.

CA...Flash Flood Watch through late Tuesday night for CAZ560>570.

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DISCUSSION...Hirsch
PREVIOUS DISCUSSION...AJ/CB
AVIATION...Hopper
FIRE WEATHER...AJ
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Area Forecast Discussion
National Weather Service San Diego CA
238 AM PDT Tue Oct 2 2018

.SYNOPSIS...
Moisture aloft associated with weakening tropical storm Rosa will continue over the region through Tuesday, with a few showers or thunderstorms possible over mainly the mountains and deserts. A Pacific trough of low pressure will bring another chance of showers Wednesday through Wednesday night, along with cooler weather. Fair and seasonally cool for the remainder of the week. By the weekend, a cooler storm system from the north will bring gusty westerly winds over the mountains and deserts, deepen the marine layer and bring another chance for some light precipitation along and west of the mountains.

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.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...

At 2 AM PDT...It was quite mild with many spots reporting temperatures in the upper 60s and 70s. Some easterly winds of 15 MPH with gusts to 25 MPH were still reported over the mts, helping to keep temperatures elevated along the foothills and valleys. Skies were partly cloudy with scattered mid to high clouds. Surface pressure gradients from the coast to the deserts were neutral. showers associated with the remnants of Rosa were lifting NE across SW AZ.

Lingering moisture from Rosa will continue to support at least a chance of some scattered shwrs/tstms today, especially with daytime heating over the mts, and possibly the Elsinore Converge Zone. Otherwise, most areas will experience fair and dry, but humid conditions with seasonal temps.

A large area of low pressure was cut-off off the NoCal Coast overnight. the low will spin south off the Coast through Wednesday and then is forecast to charge inland Wed night near Pt. Conception. Both the latest GFS and ECMWF have a similar track, timing and intensity which increases confidence in the synoptics, however the models come up with a very different precip forecast. The GFS and

consequently the NAM and WRF models produce little precip with it as it comes inland, but the ECMWF model holds onto moderate amounts across SW CA Wed evening.

Based on the inferior performance of QPF fields frequently associated with the GFS model, the generous PW in advance of this system, and a pattern supportive of lift, prefer to lean toward the ECMWF solution for POPS/QPF at this time. This suggests form 0.25-0.50 inch is possible across the coastal basin even as the weakening system moves inland. The latest MOS guidance from both the GFS/ECMWF solutions suggest Isolated thunderstorms still look possible for many sites west of the mts.

This feature will swing rapidly east Wed night/Thu morning, but a weak trough will persist along the West Coast, keeping onshore flow, a marine layer, and slightly cooler than average weather. The next chance of some light precip comes in over the weekend as the trough goes through some major amplification. This will drive stronger onshore flow, a deep marine layer, and some possible light rain or drizzle along and west of the mts Sun morning. Given the extremely dry conditions, the good news is that there is no sign of any Santa Ana type weather on the horizon.

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.AVIATION...
020900Z...Scattered to locally broken clouds between 6000-10000 feet msl are expected today and tonight. A few thunderstorms are possible, mainly over mountains and deserts between 18-00Z. They would have bases around 8000 feet, building to as high as 35000 feet, with gusty erratic winds in their vicinity.

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.MARINE...
There is a slight chance of thunderstorms Wednesday afternoon and evening. Otherwise, no hazardous marine weather is expected through Saturday.

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.SKYWARN...
Skywarn activation is not expected for today.

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.SGX WATCHES/WARNINGS/ADVISORIES...
CA...NONE.

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761
FXUS65 KPSR 021030
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
330 AM MST Tue Oct 2 2018

.SYNOPSIS...
Showers and isolated embedded thunderstorms are expected to continue
today, mainly east of the lower Colorado River valley, before
starting to taper off from the west overnight tonight. A good chance
for showers with embedded thunderstorms is anticipated on Wednesday
as well. It is expected there may be widespread nuisance flooding
with potential for more serious, localized flooding today into
tonight. Most places will be dry Thursday and Friday before a large
low pressure system develops over the western states, resulting in
increasing chances for showers and possible thunderstorms mainly
over south-central Arizona. It will stay quite cool this weekend
into early next week.

&&

.DISCUSSION...
At 3 am this morning, radar indicated widespread rain and rain
showers across much of Arizona, associated with tropical moisture
streaming into the area ahead of former hurricane Rosa. Most of the
showers are in the light to moderate category with very isolated
heavy pockets of rain. Most of the showers are east of the lower
Colorado River valley, and with the remnants of Rosa continuing to
be steered to the north-northeast, the heaviest bands of showers
will gradually push east and focus more and more over south central
Arizona by this afternoon. Rosa is now just a tropical depression,
and the low level circulation is expected to die out before reaching
Arizona; as such we will primarily be affected by the mid-level
circulation associated with Rosa, and the deep tropical moisture
that will persist over the area for some time. Due to the fact that
best heavy precipitation threats now appear confined to areas east
of the Colorado river, after coordination with the Las Vegas office
we have cancelled the flash flood watch for all zones west of the
river. A Flash Flood Watch will remain for the Arizona zones through
5 am on Wednesday.

Rosa's mid level circulation and the deep tropical moisture plume
will continue to be steered to the northeast today into Wednesday
ahead of a large Pacific upper low that continues to approach the
California coast. Moisture will thin but slowly and even though the
upper low is well to the west, sufficient dynamics/forcing
associated with it will be able to act on the moist atmosphere and
generate widespread showers today into tonight. POPs will remain
mostly categorical over most of southwest and south central Arizona
today into this evening with the most significant rains to affect
south-central Arizona (Phoenix north and east) this afternoon and
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overnight tonight. Should we see a bit of sunshine this afternoon, the heating will also help to destabilize things and we could see some moderately strong thunderstorms develop; any storms that form would be able to generate locally very heavy rains and lead to some flash flooding. As such we do want to keep the flash flood watch going through the morning hours on Wednesday. Look for another day today with very cool high temperatures that will struggle to reach into the mid 80s over the greater Phoenix area.

Since yesterday evening, rains for the most part have not been overly heavy and flash flood warnings have not been needed. Again, most of the current rains - and rain expected into the mid morning - will likely stay light to moderate and this will limit the impacts and potential flooding risk. Better chances of serious rain and flooding may well be this afternoon and evening, especially if thunderstorms develop over the area.

The upper Pacific low is forecast by the models to approach the California coast Wednesday, then quickly lift northeast and swing across Arizona Wednesday night. This will lead to continued very unsettled conditions, with scattered to numerous showers and isolated thunderstorms possible over much of the area east of the Colorado river valley Wednesday into Wednesday evening. As the low quickly moves off to the east Thursday, moisture will rapidly decrease from the west and a drier more stable and subsident west/southwest flow aloft will overspread the area. Given the presence of the Pacific low as it moves across the area, high temperatures will stay cool and in the 80s both Wednesday and Thursday.

On Friday, a weak open wave disturbance will approach from the northwest, but no precipitation is expected. Skies should remain mostly sunny and high temperatures will remain below normal and mostly in the 80s.

Operational GFS and ECMWF as well as GEFS ensemble members continue to show good consistency in the idea that a large upper level low pressure trof will develop over the western CONUS this weekend and into early next week. As this occurs we can expect periodic disturbances moving through the trof and across mainly south-central Arizona. We will see unsettled conditions with a chance for afternoon and evening showers and thunderstorms each day along with even cooler high temperatures. Highs in Phoenix will fall to near 80 Sunday and next Monday.

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.AVIATION...
South-Central Arizona including KPHX, KIWA, and KSDL:

After a lull this evening, expecting light rain and MVFR cigs to return around/just before midnight as moisture from the remains of Rosa moves northward into the region. There is a slight chance of thunderstorms as well, but confidence is too low at this point to

include TS in the TAFS at this time. Latest radar trends and Hi-Res computer guidance is now showing heavier rain and TEMPO IFR cigs moving into the PHX area in the 12-20Z time frame, along with SE winds in the 10-15 kt range, with perhaps a rogue gust as high as 25 kts. Conditions should still rapidly improve to VFR late tomorrow afternoon/evening as winds become more S-SW and drier air moves in, but lingering showers and thunderstorms will be possible through at least the early evening hours.

Southeast California/Southwest Arizona including KIPL and KBLH:

Moisture from the remains of Rosa will likely produce off-and-on showers at KBLH through at least late morning on Tuesday before

ending during the late afternoon hours on Tuesday as drier air moves into the region. Brier MVFR conditions are possible in the heavier showers. There is also a slight chance for a thunderstorm as well, but confidence is too low at this point to include TS in the KBLH TAF at this time. Chances from showers look to be less at KIPL, with just VCSH in the TAF through the rest of tonight. Light northerly winds at KBLH tonight and early Tuesday to become southerly by late morning. Light easterly winds at KIPL to become westerly by mid-morning on Tuesday.

Aviation Discussion not updated for amended TAFs.

&&

.FIRE WEATHER...
Thursday through Monday...
Most places will be dry Thursday and Friday with only very slight chances over portions of south-central AZ. Over the weekend, rain chances return but accumulations, if any, will be modest. Winds will be light through Friday before breeziness, favoring westerly directions, returns over the weekend. Humidities trend down significantly through Friday before leveling off. However, minimum humidities will remain above 20% for nearly all areas and overnight recovery will remain at least good.

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.SPOTTER INFORMATION STATEMENT...
Spotters should follow standard reporting procedures.

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.PSR WATCHES/WARNINGS/ADVISORIES...
AZ...Flash Flood Watch through late Tuesday night for AZZ530>563.

CA...Flash Flood Watch through late Tuesday night for CAZ569.

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857
FSUS46 KSGX 021032
QPSSGX

Quantitative Precipitation Forecast
National Weather Service San Diego CA
332 AM PDT Tue Oct 2 2018

Precipitation Forecast in Inches in 6-Hour Periods...
   [ Beginning times for each period are in local time...               ]
   [ For example...05Thu                                                ]
   [            ...11Thu is a forecast for 5 AM to 11 AM Thursday       ]
   [ For example...23Thu                                                ]
   [            ...05Fri is a forecast for 11 PM Thursday to 5 AM Friday]


...Orange County Coastal Areas...

   05Tue 11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu
   11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu 05Fri

   Huntington Beach
   0.00  0.00  0.00  0.02  0.03  0.17  0.15  0.01  0.00  0.00  0.00  0.00
   Newport Beach
   0.00  0.00  0.00  0.01  0.03  0.10  0.16  0.01  0.00  0.00  0.00  0.00
   Laguna Beach
   0.00  0.00  0.00  0.01  0.03  0.05  0.15  0.01  0.02  0.00  0.00  0.00
   San Clemente
   0.00  0.00  0.00  0.01  0.03  0.03  0.16  0.01  0.02  0.00  0.00  0.00


...Orange County Inland Areas...

   05Tue 11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu
   11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu 05Fri

   Anaheim
   0.00  0.00  0.00  0.02  0.03  0.17  0.24  0.01  0.00  0.00  0.00  0.00
   Fullerton
   0.00  0.00  0.00  0.02  0.03  0.17  0.15  0.01  0.00  0.00  0.00  0.00
   Brea
   0.00  0.00  0.00  0.02  0.03  0.17  0.14  0.01  0.00  0.00  0.00  0.00
   Villa Park
   0.00  0.00  0.00  0.02  0.03  0.15  0.27  0.02  0.00  0.00  0.00  0.00


...Santa Ana Mountains And Foothills...
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   05Tue 11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu
   11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu 05Fri

   Fremont Canyon
   0.00  0.00  0.00  0.03  0.03  0.16  0.30  0.02  0.02  0.00  0.00  0.00
   Silverado Canyon, 3 Mi East of Silverado
   0.00  0.00  0.00  0.03  0.03  0.16  0.34  0.03  0.02  0.00  0.00  0.00
   Modjeska Preserve
   0.00  0.00  0.00  0.02  0.03  0.11  0.32  0.02  0.02  0.00  0.00  0.00
   Santiago Peak
   0.00  0.00  0.00  0.02  0.03  0.16  0.33  0.04  0.02  0.00  0.00  0.00
   Santa Rosa Plateau
   0.00  0.00  0.00  0.01  0.03  0.05  0.23  0.02  0.02  0.00  0.00  0.00


...San Bernardino And Riverside County Valleys-The Inland Empire...

   05Tue 11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu
   11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu 05Fri

   Ontario
   0.00  0.00  0.02  0.02  0.03  0.09  0.14  0.02  0.02  0.00  0.00  0.00
   San Bernardino
   0.03  0.04  0.02  0.02  0.03  0.10  0.21  0.02  0.02  0.00  0.00  0.00
   Beaumont
   0.04  0.06  0.02  0.02  0.03  0.09  0.18  0.03  0.02  0.00  0.00  0.00
   Riverside
   0.02  0.00  0.00  0.02  0.03  0.08  0.23  0.02  0.02  0.00  0.00  0.00
   Perris Valley Channel
   0.04  0.03  0.00  0.01  0.03  0.06  0.25  0.02  0.02  0.00  0.00  0.00
   Prado Dam
   0.00  0.00  0.00  0.02  0.03  0.11  0.21  0.02  0.02  0.00  0.00  0.00
   Temecula
   0.02  0.00  0.00  0.00  0.03  0.05  0.20  0.02  0.02  0.00  0.00  0.00
   Hemet
   0.03  0.04  0.02  0.00  0.03  0.05  0.18  0.03  0.02  0.00  0.00  0.00


...Riverside County Mountains...

   05Tue 11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu
   11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu 05Fri

   Idyllwild
   0.04  0.13  0.03  0.00  0.02  0.09  0.18  0.06  0.02  0.00  0.00  0.00


...Coachella Valley...
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   05Tue 11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu
   11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu 05Fri

   Palm Springs
   0.02  0.03  0.00  0.00  0.00  0.01  0.02  0.01  0.00  0.00  0.00  0.00
   Thermal
   0.02  0.03  0.00  0.00  0.00  0.00  0.01  0.01  0.00  0.00  0.00  0.00


...San Bernardino County Mountains...

   05Tue 11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu
   11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu 05Fri

   San Antonio Dam
   0.01  0.00  0.02  0.05  0.03  0.21  0.27  0.04  0.02  0.00  0.00  0.00
   Lytle Creek
   0.02  0.06  0.02  0.05  0.03  0.16  0.31  0.04  0.02  0.00  0.00  0.00
   Wrightwood
   0.03  0.01  0.02  0.03  0.03  0.13  0.25  0.06  0.00  0.00  0.00  0.00
   Lake Arrowhead
   0.04  0.15  0.02  0.05  0.03  0.19  0.28  0.06  0.02  0.00  0.00  0.00
   Big Bear Lake
   0.03  0.14  0.02  0.01  0.02  0.10  0.22  0.07  0.02  0.00  0.00  0.00
   Big Morongo Canyon
   0.03  0.08  0.00  0.00  0.02  0.05  0.12  0.05  0.00  0.00  0.00  0.00


...Apple And Lucerne Valleys...

   05Tue 11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu
   11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu 05Fri

   Hesperia
   0.02  0.00  0.00  0.00  0.02  0.07  0.06  0.02  0.00  0.00  0.00  0.00
   Victorville
   0.02  0.07  0.00  0.00  0.02  0.07  0.04  0.01  0.00  0.00  0.00  0.00
   Apple Valley
   0.03  0.00  0.00  0.00  0.02  0.06  0.04  0.01  0.00  0.00  0.00  0.00


...San Diego County Coastal Areas...

   05Tue 11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu
   11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu 05Fri

   Oceanside
   0.00  0.00  0.00  0.00  0.03  0.04  0.27  0.01  0.03  0.00  0.00  0.00
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   Miramar
   0.00  0.00  0.00  0.00  0.03  0.03  0.22  0.01  0.02  0.00  0.00  0.00
   San Diego International Airport
   0.00  0.00  0.00  0.00  0.03  0.02  0.20  0.01  0.02  0.00  0.00  0.00
   Chula Vista
   0.00  0.00  0.00  0.00  0.03  0.02  0.14  0.01  0.02  0.00  0.00  0.00
   San Ysidro
   0.00  0.00  0.00  0.00  0.02  0.02  0.08  0.01  0.02  0.00  0.00  0.00


...San Diego County Valleys...

   05Tue 11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu
   11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu 05Fri

   Fallbrook
   0.00  0.00  0.00  0.00  0.03  0.04  0.23  0.02  0.02  0.00  0.00  0.00
   Rancho Bernardo
   0.00  0.00  0.00  0.00  0.03  0.03  0.20  0.02  0.02  0.00  0.00  0.00
   La Mesa
   0.00  0.00  0.00  0.00  0.03  0.02  0.18  0.02  0.02  0.00  0.00  0.00
   El Cajon
   0.00  0.00  0.00  0.00  0.03  0.02  0.16  0.01  0.02  0.00  0.00  0.00


...San Diego County Mountains...

   05Tue 11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu
   11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu 05Fri

   Palomar Mountain
   0.03  0.02  0.00  0.00  0.02  0.04  0.25  0.04  0.02  0.00  0.00  0.00
   Julian
   0.02  0.02  0.02  0.00  0.02  0.02  0.24  0.04  0.02  0.00  0.00  0.00
   Mount Laguna
   0.02  0.02  0.02  0.00  0.02  0.01  0.16  0.05  0.02  0.00  0.00  0.00
   Campo
   0.05  0.02  0.00  0.00  0.02  0.01  0.03  0.03  0.02  0.00  0.00  0.00


...San Diego County Deserts...

   05Tue 11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu
   11Tue 17Tue 23Tue 05Wed 11Wed 17Wed 23Wed 05Thu 11Thu 17Thu 23Thu 05Fri

   Borrego Springs
   0.02  0.02  0.00  0.00  0.02  0.01  0.01  0.01  0.00  0.00  0.00  0.00

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DISCUSSION...
Moisture from weakening Tropical Storm Rosa will continue a
chance of showers and thunderstorms through this evening. Timing
of any thunderstorms is uncertain, but when they occur, brief,
heavy rain rates will be possible. Precipitation amounts overall
will be well under one-half inch through tonight.

A Pacific storm system will bring more scattered precipitation
Tuesday night through Wednesday night, mostly from the mountains
west to the coast. Confidence in rainfall amounts is still low due
to the weakening of the storm system, but some areas could
receive 1/4 to 1/2 inch, with locally higher amounts near isolated
thunderstorms. Drier weather will likely return Thursday.

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Area Forecast Discussion
National Weather Service Phoenix AZ
525 AM MST Tue Oct 2 2018

...Updated Aviation...

.SYNOPSIS...
Showers and isolated embedded thunderstorms are expected to continue
today, mainly east of the lower Colorado River valley before
starting to taper off from the west overnight tonight. A good chance
for showers with embedded thunderstorms is anticipated on Wednesday
as well. It is expected there may be widespread nuisance flooding
with potential for more serious, localized flooding today into
tonight. Most places will be dry Thursday and Friday before a large
low pressure system develops over the western states, resulting in
increasing chances for showers and possible thunderstorms mainly
over south-central Arizona. It will stay quite cool this weekend
into early next week.

&&

.DISCUSSION...
At 3 am this morning, radar indicated widespread rain and rain
showers across much of Arizona, associated with tropical moisture
streaming into the area ahead of former hurricane Rosa. Most of the
showers are in the light to moderate category with very isolated
heavy pockets of rain. Most of the showers are east of the lower
Colorado River valley, and with the remnants of Rosa continuing to
be steered to the north-northeast, the heaviest bands of showers
will gradually push east and focus more and more over south central
Arizona by this afternoon. Rosa is now just a tropical depression,
and the low level circulation is expected to die out before reaching
Arizona; as such we will primarily be affected by the mid-level
circulation associated with Rosa, and the deep tropical moisture
that will persist over the area for some time. Due to the fact that
best heavy precipitation threats now appear confined to areas east
of the Colorado river, after coordination with the Las Vegas office
we have cancelled the flash flood watch for all zones west of the
river. A Flash Flood Watch will remain for the Arizona zones through
5 am on Wednesday.

Rosa's mid level circulation and the deep tropical moisture plume
will continue to be steered to the northeast today into Wednesday
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ahead of a large Pacific upper low that continues to approach the California coast. Moisture will thin but slowly and even though the upper low is well to the west, sufficient dynamics/forcing associated with it will be able to act on the moist atmosphere and generate widespread showers today into tonight. POPs will remain mostly categorical over most of southwest and south central Arizona today into this evening with the most significant rains to affect south-central Arizona (Phoenix north and east) this afternoon and overnight tonight. Should we see a bit of sunshine this afternoon, the heating will also help to destabilize things and we could see some moderately strong thunderstorms develop; any storms that form would be able to generate locally very heavy rains and lead to some flash flooding. As such we do want to keep the flash flood watch going through the morning hours on Wednesday. Look for another day today with very cool high temperatures that will struggle to reach into the mid 80s over the greater Phoenix area.

Since yesterday evening, rains for the most part have not been overly heavy and flash flood warnings have not been needed. Again, most of the current rains - and rain expected into the mid morning - will likely stay light to moderate and this will limit the impacts and potential flooding risk. Better chances of serious rain and flooding may well be this afternoon and evening, especially if thunderstorms develop over the area.

The upper Pacific low is forecast by the models to approach the California coast Wednesday, then quickly lift northeast and swing across Arizona Wednesday night. This will lead to continued very unsettled conditions, with scattered to numerous showers and isolated thunderstorms possible over much of the area east of the Colorado river valley Wednesday into Wednesday evening. As the low quickly moves off to the east Thursday, moisture will rapidly decrease from the west and a drier more stable and subsident west/southwest flow aloft will overspread the area. Given the presence of the Pacific low as it moves across the area, high temperatures will stay cool and in the 80s both Wednesday and Thursday.

On Friday, a weak open wave disturbance will approach from the northwest, but no precipitation is expected. Skies should remain mostly sunny and high temperatures will remain below normal and mostly in the 80s.

Operational GFS and ECMWF as well as GEFS ensemble members continue to show good consistency in the idea that a large upper level low pressure trof will develop over the western CONUS this weekend and into early next week. As this occurs we can expect periodic disturbances moving through the trof and across mainly south-central Arizona. We will see unsettled conditions with a chance for

afternoon and evening showers and thunderstorms each day along with even cooler high temperatures. Highs in Phoenix will fall to near 80 Sunday and next Monday.

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.AVIATION...
South-Central Arizona including KPHX, KIWA, and KSDL:
Light to moderate rain will persist across the Phoenix sites through much of the morning hours. Occasional periods of moderate rain will result in MVFR visibilities though the moderate rain should lift north of the city by mid morning. While current cigs are fairly high, upstream cigs have been in a 3K-5K ft range and these cigs should spread into the metro as the heavier rain abates.

Cigs below 6K ft should persist through the afternoon and showers and possibly some isold thunderstorms could develop later in the afternoon. Upslope/foothill areas around the northern fringes of the city may see better storm coverage, but conceivably a storm could drift over one of the aerodrome sites. Lower cigs and some showers could persist through the evening hours impacting operations.

Southeast California/Southwest Arizona including KIPL and KBLH:
Light showers will persist around KBLH through the morning with drier conditions further west. Cigs will maintained in a 4-6K ft range for much of the day with only periods where cigs scatter. Conditions should improve substantially after sunset.

Aviation Discussion not updated for amended TAFs.

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.FIRE WEATHER...
Thursday through Monday...
Most places will be dry Thursday and Friday with only very slight chances over portions of south-central AZ. Over the weekend, rain chances return but accumulations, if any, will be modest. Winds will be light through Friday before breeziness, favoring westerly directions, returns over the weekend. Humidities trend down significantly through Friday before leveling off. However, minimum humidities will remain above 20% for nearly all areas and overnight recovery will remain at least good.

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.SPOTTER INFORMATION STATEMENT...
Spotters should follow standard reporting procedures.

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897
FXUS65 KPSR 022019
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
119 PM MST Tue Oct 2 2018

.SYNOPSIS...
Showers and isolated embedded thunderstorms are will continue
today, mainly east of the lower Colorado River valley before
starting to taper off from the west overnight tonight. Areas of
flooding remain possible this afternoon and evening across south-
central Arizona. A good chance for showers with embedded
thunderstorms is anticipated on Wednesday as well. Most places
will be dry Thursday and Friday before a large low pressure system
develops over the western states, resulting in increasing chances
for showers and possible thunderstorms mainly over south-central
Arizona. It will stay quite cool this weekend into early next
week.

&&

.DISCUSSION...
Axis of very rich moisture is focused across southwest and south-
central Arizona, featuring precipitable water values in excess of
1.7 inches. The primary circulation associated with the remnants
of Rosa is becoming more diffuse, with a subsequent weakening of
broad isentropic ascent that was in place across south-central
Arizona. Scattered showers continue to develop, however, and
remain efficient rainfall producers. Of additional concern this
afternoon, scattered clearing within the thicker cloud cover is
contributing to stronger pockets of heating primarily south and
west of Phoenix, and visible satellite imagery is noting low-
topped convection developing in spots. With 20-30 kt of flow, it
will be more difficult for any individual cell or band to produce
extensive flooding. However, the amount of moisture content will
still cause some concern for localized flooding issues, especially
if any storms can become anchored or train near the higher
terrain. Thus, will keep the Flash Flood Watch as is, continuing
through early Wednesday morning for all of southwest and south-
central Arizona. Also can't rule out some patchy fog developing if
enough clearing can develop tonight, perhaps across southwest
Arizona, but confidence is quite low.

The high moisture content will stick around into Wednesday,
supporting periods of scattered showers and even a few
thunderstorms into the afternoon. Any new development will be
partially driven by modest height falls ahead of a closed low off
the central California coast. This system will quickly move east-
northeastward early Thursday into the eastern Great Basin, but
still may provide enough influence on Thursday for a few showers
```

across Arizona. Mean troughing will persist across the western United States into early next week, becoming reinforced this weekend. Another bout of cooler temperatures and increased precipitation chances are expected this weekend as a result, with high temperatures forecast to be well below normal.

&&

.AVIATION...
South-Central Arizona including KPHX, KIWA, and KSDL:
Substantial improvements in visibility and cigs have occurred since late this morning as the area of widespread showers has weakened. However, scattered showers continua to develop across the Phoenix area. Their quick motion should result in brief periods of showers and reduced visibilities, but overall aviation concerns should be limited compared to this morning. However, cigs below 7000 feet persist and could still see isolated thunderstorms develop across south-central Arizona. Lower cigs and some showers could persist through the evening hours impacting operations.

Southeast California/Southwest Arizona including KIPL and KBLH:
Light showers will persist around KBLH through the morning with drier conditions further west. Cigs will maintained in a 4-6K ft range for much of the day with only periods where cigs scatter. Conditions should improve substantially after sunset.

Aviation Discussion not updated for amended TAFs.

&&

.FIRE WEATHER...
Friday through Tuesday... Most places will be dry Friday with only very slight chances over portions of south-central AZ. Over the weekend, rain chances return but accumulations, if any, will be modest. Winds will be light Friday before breeziness, favoring westerly directions, returns over the weekend. Humidities will be decrease into Friday and level off this weekend. However, minimum humidities will remain above 20% for nearly all areas and overnight recovery will remain at least good. Another substantial cooldown is anticipated Sunday and Monday with scattered showers possible, as high temperatures struggle to get out of the low 80s.

&&

.SPOTTER INFORMATION STATEMENT...
Spotters should follow standard reporting procedures.

&&

.PSR WATCHES/WARNINGS/ADVISORIES...
AZ...Flash Flood Watch through late tonight for AZZ530>563.

CA...Flash Flood Watch through late tonight for CAZ569.

Iowa State University
Iowa Environmental Mesonet

National Weather Service Raw Text Product

Displaying AFOS PIL: **RERPSR** Received: **2018-10-03 08:25 UTC**

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Next in Time

Latest Product

View As Image

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834
SXUS75 KPSR 030826
RERPSR

RECORD EVENT REPORT
NATIONAL WEATHER SERVICE PHOENIX AZ
125 AM MST WED OCT 3 2018

...RECORD DAILY MAXIMUM RAINFALL SET AT PHOENIX AZ AND YUMA AZ...

A RECORD RAINFALL OF 2.36 INCHES WAS SET AT PHOENIX AZ YESTERDAY.
THIS BREAKS THE OLD RECORD OF 0.60 SET IN 1981.

A RECORD RAINFALL OF 0.39 INCHES WAS SET AT YUMA AZ YESTERDAY.
THIS BREAKS THE OLD RECORD OF 0.12 SET IN 1954.

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IOWA STATE UNIVERSITY

College of Ag

667
FXUS66 KSGX 030947
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
247 AM PDT Wed Oct 3 2018

.SYNOPSIS...
A low pressure system will move through Southern California today, bringing increasing showers today into Thursday morning. There is a slight chance of thunderstorms late today. The region remains in cool northwest flow aloft through next Tuesday. A trough on Saturday night and Sunday will bring a slight chance of showers, along with brisk winds in the mountains and deserts.

&&

.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...

Now with the tropical stuff in the rear view mirror, we can replace our tropical thinking with extra-tropical jet-driven thinking more typical of fall. A cutoff low pressure system is slowly moving into central and Southern California today. A few sprinkles or light showers are already passing through L.A. County. Sprinkles or very light showers will be gradually increasing during the day from west to east, but the best chance of showers appears to be this evening and overnight. There is also a small chance of thunderstorms between about 4 to 8 pm, mainly north of SD County where it will be more unstable. Rainfall will not be impressive. A few mountain spots could harvest a half inch or more, but most of the lowlands will come in between a tenth and a quarter inch, or less than a tenth inch in the desert. Winds will pick up in the mountains and deserts during afternoons through the nights through Thursday. Gusts will be mostly in the 30 to 40 mph range. Gone are those warm and muggy tropical days. The effective sea breeze and a cooling trend that got started Tuesday will continue today and Thursday. Highs in the 70s will be common at lower elevations and the high desert, with mostly 80s in the low desert. Mountains top out in the 50s and 60s. Welcome to fall. The showers end fairly early Thursday, but skies won't clear fully. The northwest flow behind the trough will keep our daytime temperatures below average for the coming week. A weak shortwave moves through Friday morning with little impact except maybe to help rebuild the disrupted marine layer. A bigger trough develops

this weekend and drops into Southern California Sunday. This will boost winds in the mountains and deserts where top gusts on Saturday could exceed 50 mph. We are on the dry side of this trough, but with just enough trajectory over the water we have a slight chance of showers late Saturday into Sunday. Obviously, models are not in super agreement on the trajectory of the low, hence the small chances represent a blend of solutions. The large scale pattern across the country featuring a western trough and an eastern ridge holds at least into the middle of next week, keeping our weather on the cool side of average.

&&

.AVIATION...
030930Z...Coasts/Valleys/Mountains...SCT-BKN clouds with bases 4000-6000 ft MSL will obscure coastal mountain slopes through Thu morning. A weak front will bring SHRA after 18Z north of San Diego County, and after 20Z in San Diego County. ISO TSRA also possible 18-08Z. CIGS lowering to 1500-2500 ft MSL with SHRA, possibly as low as 1000 ft MSL with vis 3-5 SM in heavier showers and thunderstorms. ISO SHRA continuing tonight through Thu morning.

Deserts...A few light showers are possible 22-06Z this afternoon and evening, mainly over the high desert. SW to W winds will increase around 22Z with sfc gusts 30-40 kt along the desert mountain slopes and into the deserts. MOD-STG UDDFS, rotors, and LLWS possible over and NE/E of the mountains this afternoon and evening. Winds will gradually decrease after 04/06Z.

&&

.MARINE...
Showers and a slight chance of thunderstorms over the coastal waters this afternoon and evening. These storms may produce brief heavy rain and cloud-to-water lightning. Conditions will improve tonight. No hazardous marine weather is expected through Saturday morning. Another weak cold front may bring more showers and gusty west-northwest winds sometime Saturday afternoon into Sunday.

&&

.BEACHES...
There is a slight chance of thunderstorms at the beaches this afternoon into late this evening. Conditions will improve tonight.

&&

.SKYWARN...
Skywarn activation is not requested. However weather spotters are

October 3, 2018 Exceptional Event, Imperial County **Appendix A**

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471
FXUS65 KPSR 031013
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
310 AM MST Wed Oct 3 2018

.SYNOPSIS...
More showers with embedded thunderstorms will develop today ahead
of weather disturbance moving into the region from the Pacific. Drier
air will finally surge into the area Thursday and Friday though
temperatures will remain seasonably cool. Another cool Pacific
weather system will dip into the Southwest over the weekend
resulting in increased chances for showers and thunderstorms
mainly over the central and eastern portions of Arizona. It will
also become even cooler with afternoon highs struggling to get into
the 80s in many locations, and delightful overnight lows in the 50s.

&&

.DISCUSSION...
An usually moist airmass remains trapped over much of the forecast
area with 00Z sounding data and latest objective analysis
indicating PWs well in excess of 1.50 inches, boundary layer mixing
ratios near 15 g/kg, and nearly saturated moist adiabatic profiles.
Meanwhile, a deep Pacific PV anomaly was translating eastward
towards the southern California coast with height falls, midlevel
cold advection, and favorable jet energy providing the initial
glimpses of synoptic forced ascent inland. Given the anomalous
regional moisture content and deep southwesterly upslope flow and
moisture transport, essentially all HREF members, local high
resolution models, and multiple iterations of HRRR output suggest
additional showers erupting through much of the northeast quarter of
the CWA by as early as sunrise and persisting into the afternoon.
Though some drier midlevel air was already punching into SW Arizona
per satellite imagery, much like yesterday, heightened freezing
levels and much of the moisture below this level will support
efficient warm rain processes in any scattered showers. With all
this model evidence and saturated soils through much of central
Arizona, have opted to extend a portion of the Flash Flood Watch
into the afternoon.

The Pacific wave will rapidly begin to fill and and lift into the
Great Basin later tonight and Thursday leading to deeper advection
of dry air and more notable subsidence spreading into the region.
With such a moist airmass needed to scour out, conceivably the
persistent southwest flow could continue to support some lighter
showers over higher terrain areas in central/eastern Arizona into
Thursday morning. However, forecast soundings also depict rather
substantial warming in the H7-H5 layer which should quickly cap
off any presumed shower activity by Thursday afternoon.
```

A fast moving, low amplitude, dry shortwave will race through Arizona Friday within the overall western Conus troughing and cyclonic flow pattern. This should of little consequence other than to maintain dampened heights and temperatures heading into the weekend. For most of the area, have cut temperatures towards the lower end of the guidance envelop as historically after such widespread excessive rainfall (and particularly with a lower sun angle), soil moisture dampens near sfc lapse rates and high temperatures lag would otherwise would be expected.

Mean troughing will persist over the western Conus through at least the first half of next week with a notably deep wave rapidly digging towards the four corners late in the weekend. While the over land trajectory of this wave will result in more marginal moisture content, the magnitude of cold air diving into the trough base should be quite effective in squeezing out whatever moisture is available. The greatest forecast challenge will be to determine how far south this core of the shortwave/cold air will dig before translating eastward. The current operational GFS keeps the bulk of the shortwave energy towards four corners while the ECMWF and a majority of ensemble support dig the main cold core into central Arizona. Given the strong jet energy is forecast to remain on the west side of the larger trough axis, feel the more southern solution would be favored and better precipitation chances dipping further south into a larger section of the forecast area. Regardless, temperatures will decrease even further and dip at least 10F below average for most areas early next week.

&&

.AVIATION...
South-Central Arizona including KPHX, KIWA, and KSDL:
A very moist and somewhat unstable airmass will continue to produce scattered showers and a few thunderstorms across the greater Phoenix area through the rest of tonight and into early Wednesday. Cigs at the Phoenix area terminals are expected to remain mainly in the MVFR range, with occasional brief dips into the IFR range during heavier showers through about midday on Wednesday.

Somewhat drier air moving into the region is expected to finally end the shower activity and allow cigs to rise into the VFR range by the late afternoon hours on Wednesday, with at least some clearing on forecast Wednesday night. Winds are expected to remain from a southeasterly direction through midday Wednesday before switching to a westerly direction on Wednesday afternoon.

Southeast California/Southwest Arizona including KIPL and KBLH:
Drier air moving into the region will allow skies to gradually clear from west to east tonight and Wednesday. Winds at KBLH to remain mainly from a southerly direction through late afternoon on Wednesday before becoming southwesterly and becoming a bit gusty Wednesday evening/night. Winds at KIPL to remain from a westerly

to southwesterly direction through the TAF period.

Aviation Discussion not updated for amended TAFs.

&&

.FIRE WEATHER...
Friday through Tuesday:
Most places will be dry Friday with only very slight chances over portions of south-central AZ. Over the weekend, rain chances return but accumulations, if any, will be modest. Winds will be light Friday before breeziness, favoring westerly directions, returns over the weekend. Humidities will be decrease into Friday and level off

this weekend. However, minimum humidities will remain above 20% for nearly all areas and overnight recovery will remain at least good. Another substantial cool down is anticipated Sunday and Monday with scattered showers possible, as high temperatures struggle to get out of the low 80s.

&&

.SPOTTER INFORMATION STATEMENT...
Spotters should follow standard reporting procedures.

&&

.PSR WATCHES/WARNINGS/ADVISORIES...
AZ...Flash Flood Watch through this afternoon for AZZ534-537-538-540>553-555>558-560>563.

Flash Flood Watch until 5 AM MST early this morning for AZZ539-554-559.

CA...None.

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DISCUSSION...MO
AVIATION...Percha
FIRE WEATHER...Rogers/AJ

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Department of Agronomy

503
FXUS66 KSGX 031644
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
940 AM PDT Wed Oct 3 2018

.SYNOPSIS...
A trough of low pressure will bring scattered showers as it moves across the region later today and tonight. Any shower activity will end Thursday morning. Cool northwest behind the front will continue through early next week. A trough on Saturday night and Sunday will bring a slight chance of showers, along with brisk winds in the mountains and deserts.

&&

.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE... SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO COUNTIES...

The rain is still far to our west this morning. A band of rain associated with a cold front moving across Santa Barbara County between 6-9 AM and dropped anywhere from 0.10"-0.50". No lightning was detected during that timeframe. Isolated showers ahead of the front were reported in Orange County with trace amounts at Fullerton and John Wayne Airport. The showers were moving northeast in deep layer southwest flow aloft ahead of a deep closed low centered 700 miles west of San Diego, so not much rain will fall through early afternoon in our area.

The visible satellite loop shows a clearly defined area of enhanced clouds extending from Santa Barbara County southwestward over the coastal waters 200 miles west of San Diego. This band of clouds and precipitation will slowly move east today, ejected eastward as a shortwave rounds the base of the trough and accelerates its eastward movement. That being said, there won't be too much in the way of precipitation until later this afternoon through tonight when these features move across SoCal. A thunderstorm is possible between 4-10 pm when instability will be greatest (300-500 J/kg of CAPE).

Rainfall amounts will generally be light, but brief heavy downpours with are possible in the strongest cells. Orographics in the uniform south-southwest flow ahead of the trough will enhance rain potential on the southwest facing mountain slopes and foothills where 0.50" or more is possible. Most coastal and valleys areas will likely see 0.05"-0.20". The lower deserts will be hard-pressed to see much rain, but a few convective cells may make it over the mountains. The showers will linger longest over the mountains where they likely won't end until Thursday morning.

Cool northwest flow fills in behind trough with highs generally in

the 70s in the coastal/valley zones and the high deserts, and 80s in the low deserts through early next week. Mountain highs will be in the 50s and 60s.

From Previous Discussion

A weak shortwave moves through Friday morning with little impact except maybe to help rebuild the disrupted marine layer. A bigger trough develops this weekend and drops into Southern California Sunday. This will boost winds in the mountains and deserts where top gusts on Saturday could exceed 50 mph. We are on the dry side of this trough, but with just enough trajectory over the water we have a slight chance of showers late Saturday into Sunday. Obviously, models are not in super agreement on the trajectory of the low, hence the small chances represent a blend of solutions. The large scale pattern across the country featuring a western trough and an eastern ridge holds at least into the middle of next week, keeping our weather on the cool side of average.

&&

.AVIATION...
031630Z...Coasts/Valleys/Mountains...SCT-BKN clouds with bases 4000-6000 ft MSL will obscure west-facing mountain slopes through Thursday morning. SCT SHRA has moved into Orange, Riverside and SW San Bernardino counties this morning ahead of a weak front. SHRA in San Diego County expected after 20Z. SHRA activity will increase late this afternoon and evening with isolated TSRA possible 18-08Z. CIGS lowering to 1500-2500 ft MSL with SHRA, possibly as low as 1000 ft MSL with vis 3-5 SM in heavier showers and thunderstorms. Isolated SHRA continuing through Thursday morning.

Deserts...A few light showers are possible through 06Z Thursday, mainly over the high desert. SW to W winds will increase after 22Z with sfc gusts 30-40 KT along the desert mountain slopes and into the deserts. MOD-STG UDDFS and LLWS possible over and NE/E of the mountains this afternoon and evening. Winds will gradually decrease after 04/06Z.

&&

.MARINE...
Showers and isolated thunderstorms over the coastal waters this afternoon and evening. These storms could produce brief heavy rain, lightning and gusty surface winds. Conditions will improve tonight. No hazardous marine weather is expected Thursday through Saturday morning. Another weak cold front may bring more showers and gusty west-northwest winds sometime Saturday afternoon into Sunday.

&&

.BEACHES...
There is a slight chance of thunderstorms at the beaches this afternoon into late this evening. Conditions will improve tonight.

October 3, 2018 Exceptional Event, Imperial County **Appendix A**

National Weather Service Raw Text Product

Displaying AFOS PIL: **SPSPSR** Received: **2018-10-03 18:21 UTC**

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Latest Product View As Image

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445
WWUS85 KPSR 031821
SPSPSR

Special Weather Statement
National Weather Service Phoenix AZ
1121 AM MST WED OCT 3 2018

AZZ532-535-536-031845-
Gila River Valley AZ-Southeast Yuma County AZ-Yuma AZ-
1121 AM MST WED OCT 3 2018

...SIGNIFICANT WEATHER ADVISORY FOR CENTRAL YUMA COUNTY UNTIL 1145 AM
MST...

At 1120 AM MST, Doppler radar was tracking a strong thunderstorm near
Fortuna Foothills, moving north at 20 mph.

Winds in excess of 40 mph will be possible with this storm.

Locations impacted include...
Fortuna Foothills, Blaisdell, Ligurta and Kinter.

This includes the following highways...
AZ Interstate 8 between mile markers 12 and 22.
AZ Route 95 between mile markers 34 and 43.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

This storm may intensify, so be certain to monitor local radio
stations and available television stations for additional information
and possible warnings from the National Weather Service.

&&

LAT...LON 3250 11435 3252 11447 3283 11444 3279 11423
TIME...MOT...LOC 1820Z 192DEG 17KT 3259 11440

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LJH
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October 3, 2018 Exceptional Event, Imperial County **Appendix A**

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635
WWUS85 KPSR 031931
SPSPSR

Special Weather Statement
National Weather Service Phoenix AZ
1231 PM MST WED OCT 3 2018

AZZ532-032000-
Yuma AZ-
1231 PM MST WED OCT 3 2018

...SIGNIFICANT WEATHER ADVISORY FOR WEST CENTRAL YUMA COUNTY UNTIL
100 PM MST...

At 1231 PM MST, Doppler radar was tracking a strong thunderstorm 10
miles southeast of Somerton, moving northeast at 10 mph.

Winds in excess of 40 mph will be possible with this storm.

Locations impacted include...
Yuma.

This includes the following highways...
AZ Interstate 8 near mile marker 5.
AZ Route 195 between mile markers 8 and 26.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

This storm may intensify, so be certain to monitor local radio
stations and available television stations for additional information
and possible warnings from the National Weather Service.

&&

LAT...LON 3242 11457 3246 11469 3269 11457 3258 11437
      3255 11437 3240 11453
TIME...MOT...LOC 1931Z 214DEG 8KT 3249 11457

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LJH
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744
FXUS65 KPSR 032102
AFDPSR

Area Forecast Discussion
National Weather Service Phoenix AZ
202 PM MST Wed Oct 3 2018

.SYNOPSIS...
The potential for scattered showers and thunderstorms will continue into early Thursday morning, before drier air overspreads the region through Saturday. Another cool Pacific weather system will dip into the Southwest over the weekend resulting in increased chances for showers and thunderstorms mainly over the central and eastern portions of Arizona. It will also become even cooler with afternoon highs struggling to get into the 80s in many locations, and delightful overnight lows in the 50s.

&&

.DISCUSSION...
Abnormally high moisture remains in place across most of Arizona, resulting in widespread and low-based cumulus. Most of this moisture is confined to the lowest 3 km AGL, with drier air aloft spreading northeastward amidst the strengthening flow aloft. Most of the cumulus has been struggling to develop into showers, and if they do they have mostly been short-lived. The area of enhanced low-level convergence is focused just east of the lower Colorado River, and suspect that this area could potentially see shower and thunderstorm development for the next few hours. Otherwise, showers are persisting into southern Gila County, likely enhanced by the terrain. The Flash Flood Watch will likely be allowed to expire at 5 PM PDT/MST as the loss of diurnal heating leads to decreasing chances of convection over the lower deserts.

Large-scale forcing for ascent will spread eastward this evening as a closed low off the southern California coast transitions to an open wave and rapidly progresses northeastward. This will primarily focus new convective development across northwest Arizona, but enough of an influence could extend into La Paz County and far eastern Riverside County to support new precipitation development later tonight. The increase in deep-layer shear coinciding with antecedent moisture may be enough to support organized storms, and this is reflected in HREF ensemble UH-track probabilities. Given the likelihood this convection will not be particularly deep, the primary threats are expected to be strong wind gusts and small hail with the strongest cells. This is also supported by the SPC SWODY1 which has a marginal risk extending into northern La Paz County.

The pattern will remain unusually active for early October into next week, with the most significant disturbance being a shortwave

trough digging into the Southwest. Model guidance has converged into developing a closed low over the Great Basin, placing most of southeast California and southwest/south-central Arizona along the base of the trough with strong westerly flow aloft positioned overhead. Precipitation should favor the northern half of Arizona, but could still expect to see showers and a few thunderstorms across the lower deserts and especially into southern Gila County Sunday afternoon. Other impacts will be gusty westerly winds and temperatures 10-15 degrees below normal. In fact, most areas will struggle to get out of the 70s Sunday through Tuesday.

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.AVIATION...
South-Central Arizona including KPHX, KIWA, and KSDL:
A very moist airmass will continue to produce isolated showers across the greater Phoenix area through about 23-00Z. The best chances will be at KIWA and KSDL where southwest low-level flow moving up terrain may help trigger more showers. Thunderstorms are very unlikely because of stable layers present around 7 and 15 kft, but terrain interactions could potentially produce deep enough convection to trigger a strike or two. In addition, broken MVFR ceilings should continue at KIWA until 20-21Z, with ceilings elsewhere remaining around 3-5 kft. Light and variable winds should eventually become southwesterly this afternoon, but remain below 10 knots aside from gusts with shower activity.

Somewhat drier air moving into the region this evening and overnight should eventually clear skies out by sunrise tomorrow. Although there is a slight chance fog could develop given the saturated soils and clearing skies tonight, winds will most likely stay around 5 knots with the passing disturbance to our northwest. This should prevent widespread fog from developing, with any patchy fog being most likely at KIWA closer to the higher terrain. For now, we have left them out of the TAF as confidence is low. Aside from this small possibility, no impacts are expected tomorrow with mostly clear skies and light diurnal winds.

Southeast California/Southwest Arizona including KIPL and KBLH:

Progressively drier air will continue to work its way into the region with only few to scattered cumulus 5-8 kft decks developing this afternoon. Very isolated showers may develop between 22-06Z as a relatively deep upper-level disturbance pushes through from the west. KBLH will have better chances as they will be further north and east closer to where isolated to scattered thunderstorms are expected over the higher terrain. These storms, combined with influence from the disturbance, should cause S-SW winds to become northwesterly at BLH overnight. The passing disturbance should also cause downsloping westerly wind gusts to 25 knot at KIPL late this evening and overnight.

Aviation Discussion not updated for amended TAFs.

October 3, 2018 Exceptional Event, Imperial County **Appendix A**

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.FIRE WEATHER...
Saturday through Wednesday:
Winds will begin increasing Saturday ahead of a strong low
pressure system moving into the western United States, becoming
breezy out of the Southwest during the afternoon. Westerly winds
will undergo a slight strengthening on Sunday as the low pressure
system drifts southward, but will coincide with a significant cool
down as temperatures fall to 10-15 degrees below seasonal normals.
Scattered showers and a few thunderstorms also become increasingly
likely Sunday, especially across southwest and south-central
Arizona. Humidities on Saturday will initially fall to around 30%
but improve into Sunday as moisture increases and temperatures
cool across south-central Arizona. Drier air will remain parked
over southeast California and southwest Arizona. Less confidence
in the evolution in the pattern into early next week, but
temperatures will likely stay cool with at least slight chances of
rainfall continuing.

&&

.SPOTTER INFORMATION STATEMENT...
Spotters should follow standard reporting procedures.

&&

.PSR WATCHES/WARNINGS/ADVISORIES...
AZ...Flash Flood Watch until 5 PM MST this afternoon for AZZ534-537-
     538-540>553-555>558-560>563.

CA...None.
&&

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DISCUSSION...Rogers
AVIATION...Wilson/Percha
FIRE WEATHER...Rogers
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College of Ag

Department of Agronomy

October 3, 2018 Exceptional Event, Imperial County **Appendix A**

National Weather Service Raw Text Product

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View All KPSR Products for 03 Oct 2018

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Latest Product View As Image

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045
WWUS85 KPSR 032109
SPSPSR

Special Weather Statement
National Weather Service Phoenix AZ
209 PM MST WED OCT 3 2018

AZZ535-536-032145-
Gila River Valley AZ-Southeast Yuma County AZ-
209 PM MST WED OCT 3 2018

...SIGNIFICANT WEATHER ADVISORY FOR CENTRAL YUMA COUNTY UNTIL 245 PM
MST...

At 209 PM MST, Doppler radar was tracking a strong thunderstorm 11
miles south of Wellton, or 20 miles southeast of Fortuna Foothills,
moving northeast at 15 mph.

Winds in excess of 40 mph will be possible with this storm.

This storm will remain over mainly rural areas of central Yuma
County.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

This storm may intensify, so be certain to monitor local radio
stations and available television stations for additional information
and possible warnings from the National Weather Service.

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LAT...LON 3248 11409 3251 11413 3265 11405 3259 11395
TIME...MOT...LOC 2109Z 216DEG 14KT 3251 11410

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LJH
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October 3, 2018 Exceptional Event, Imperial County **Appendix A**

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312
WWUS85 KPSR 032236
SPSPSR

Special Weather Statement
National Weather Service Phoenix AZ
336 PM PDT WED OCT 3 2018

CAZ562-563-566-567-032315-
Imperial County West CA-Salton Sea CA-Imperial County Southwest CA-
Imperial Valley CA-
336 PM PDT WED OCT 3 2018

...SIGNIFICANT WEATHER ADVISORY FOR NORTHWESTERN IMPERIAL COUNTY
UNTIL 415 PM PDT...

At 335 PM PDT, Doppler radar was tracking a strong thunderstorm 13
miles northwest of Plaster City, moving north at 28 mph.

Half inch hail and wind gusts up to 50 mph will be possible with this
storm.

Locations impacted include...
Salton City and Winona.

This includes the following highways...
CA Route 78 between mile markers 4 and 13.
CA Route 86 between mile markers 33 and 59.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Torrential rainfall is also occurring with this storm, and may lead
to localized flooding. Do not drive your vehicle through flooded
roadways.

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LAT...LON 3280 11597 3287 11603 3292 11606 3339 11599
      3335 11579 3321 11554 3286 11587
TIME...MOT...LOC 2235Z 200DEG 33KT 3297 11595

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JS
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Facebook

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441
WWUS85 KPSR 032326
SPSPSR

Special Weather Statement
National Weather Service Phoenix AZ
426 PM PDT WED OCT 3 2018

CAZ560-040000-
Joshua Tree NP West CA-
426 PM PDT WED OCT 3 2018

...SIGNIFICANT WEATHER ADVISORY FOR SAN BERNARDINO AND RIVERSIDE
COUNTIES UNTIL 500 PM PDT...

At 426 PM PDT, Doppler radar was tracking a strong thunderstorm 11
miles south of Joshua Tree, or 16 miles north of Indio, moving
northeast at 30 mph.

Half inch hail and wind gusts up to 50 mph will be possible with this
storm.

Locations impacted include...
Lost Horse-Keys Village.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Torrential rainfall is also occurring with this storm, and may lead
to localized flooding. Do not drive your vehicle through flooded
roadways.

&&

LAT...LON 3408 11642 3408 11627 3412 11626 3412 11606
      3408 11604 3407 11600 3404 11600 3390 11617
      3392 11620 3392 11629 3395 11641 3403 11647
TIME...MOT...LOC 2326Z 208DEG 24KT 3396 11627

$$

JS
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```
180
WUUS55 KPSR 040047
SVRPSR
CAC065-071-040115-
/O.NEW.KPSR.SV.W.0089.181004T0047Z-181004T0115Z/

BULLETIN - IMMEDIATE BROADCAST REQUESTED
Severe Thunderstorm Warning
National Weather Service Phoenix AZ
547 PM PDT WED OCT 3 2018

The National Weather Service in Phoenix has issued a

* Severe Thunderstorm Warning for...
  San Bernardino County in southern California...
  Riverside County in southern California...

* Until 615 PM PDT.

* At 546 PM PDT, a severe thunderstorm was located 11 miles south of
  Twentynine Palms, moving northeast at 30 mph.

  HAZARD...60 mph wind gusts and penny size hail.

  SOURCE...Radar indicated.

  IMPACT...Expect damage to roofs, siding, and trees.

* This severe thunderstorm will remain over mainly rural areas of San
  Bernardino and Riverside Counties.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

For your protection move to an interior room on the lowest floor of a
building.

Torrential rainfall is occurring with this storm, and may lead to
flash flooding. Do not drive your vehicle through flooded roadways.

&&

LAT...LON 3408 11603 3407 11600 3406 11601 3403 11600
      3403 11580 3386 11595 3386 11609 3394 11614
      3412 11606
TIME...MOT...LOC 0046Z 208DEG 24KT 3397 11601

HAIL...0.75IN
WIND...60MPH

$$

JS
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701
WWUS85 KPSR 040051
SPSPSR

Special Weather Statement
National Weather Service Phoenix AZ
551 PM PDT WED OCT 3 2018

CAZ563-564-566-567-040130-
Chuckwalla Mountains CA-Imperial County West CA-Salton Sea CA-
Imperial Valley CA-
551 PM PDT WED OCT 3 2018

...SIGNIFICANT WEATHER ADVISORY FOR NORTHWESTERN IMPERIAL COUNTY
UNTIL 630 PM PDT...

At 550 PM PDT, Doppler radar was tracking a strong thunderstorm near
Westmorland, or near Brawley, moving northeast at 30 mph.

Half inch hail and wind gusts up to 50 mph will be possible with this
storm.

Locations impacted include...
Brawley, Westmorland, Calipatria, Niland and Wiest.

This includes the following highways...
CA Route 78 between mile markers 14 and 15.
CA Route 111 between mile markers 23 and 48.
CA Route 86 between mile markers 16 and 35.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Torrential rainfall is also occurring with this storm, and may lead
to localized flooding. Do not drive your vehicle through flooded
roadways.

&&

LAT...LON 3288 11560 3297 11578 3333 11563 3318 11531
TIME...MOT...LOC 0050Z 208DEG 24KT 3300 11565

$$

JS
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October 3, 2018 Exceptional Event, Imperial County **Appendix A**

```
625
WWUS85 KPSR 040054
SPSPSR

Special Weather Statement
National Weather Service Phoenix AZ
554 PM PDT WED OCT 3 2018

CAZ570-040130-
Chuckwalla Valley CA-
554 PM PDT WED OCT 3 2018

...SIGNIFICANT WEATHER ADVISORY FOR SAN BERNARDINO AND RIVERSIDE
COUNTIES UNTIL 630 PM PDT...

At 553 PM PDT, Doppler radar was tracking a strong thunderstorm near
Midland, or 32 miles northeast of Desert Center, moving north at
32 mph.

Half inch hail and wind gusts up to 50 mph will be possible with this
storm.

Locations impacted include...
Midland.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Torrential rainfall is also occurring with this storm, and may lead
to localized flooding. Do not drive your vehicle through flooded
roadways.

&&

LAT...LON 3376 11485 3380 11505 3408 11496 3408 11463
      3407 11463
TIME...MOT...LOC 0053Z 199DEG 39KT 3393 11489

$$

JS
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569
WUUS55 KPSR 040118
SVRPSR
CAC025-065-040145-
/O.NEW.KPSR.SV.W.0090.181004T0118Z-181004T0145Z/

BULLETIN - IMMEDIATE BROADCAST REQUESTED
Severe Thunderstorm Warning
National Weather Service Phoenix AZ
618 PM PDT WED OCT 3 2018

The National Weather Service in Phoenix has issued a

* Severe Thunderstorm Warning for...
  Northwestern Imperial County in southeastern California...
  Riverside County in southern California...

* Until 645 PM PDT.

* At 618 PM PDT, a severe thunderstorm was located 10 miles southeast
  of Bombay Beach, or 17 miles north of Brawley, moving north at 30
  mph.

  HAZARD...60 mph wind gusts and penny size hail.

  SOURCE...Radar indicated.

  IMPACT...Expect damage to roofs, siding, and trees.

* Locations impacted include...
  Bombay Beach, Calipatria, Slab City, Niland and Imperial Hot
  Mineral Springs.

* This includes CA Route 111 between mile markers 26 and 59.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

For your protection move to an interior room on the lowest floor of a
building.

Torrential rainfall is occurring with this storm, and may lead to
flash flooding. Do not drive your vehicle through flooded roadways.

&&

LAT...LON 3302 11554 3313 11577 3352 11576 3353 11553
      3336 11521 3309 11544
TIME...MOT...LOC 0118Z 199DEG 24KT 3322 11564

HAIL...0.75IN
WIND...60MPH

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579
WUUS55 KPSR 040139
SVRPSR
CAC025-065-040215-
/O.NEW.KPSR.SV.W.0091.181004T0139Z-181004T0215Z/

BULLETIN - IMMEDIATE BROADCAST REQUESTED
Severe Thunderstorm Warning
National Weather Service Phoenix AZ
639 PM PDT WED OCT 3 2018

The National Weather Service in Phoenix has issued a

* Severe Thunderstorm Warning for...
  North central Imperial County in southeastern California...
  Riverside County in southern California...

* Until 715 PM PDT.

* At 639 PM PDT, a severe thunderstorm was located 8 miles northeast
  of Bombay Beach, or 15 miles south of Chiriaco Summit, moving north
  at 55 mph.

  HAZARD...60 mph wind gusts and quarter size hail.

  SOURCE...Radar indicated.

  IMPACT...Hail damage to vehicles is expected. Expect wind damage
           to roofs, siding, and trees.

* Locations impacted include...
  Desert Center, Chiriaco Summit, Bombay Beach, Cottonwood Visitor
  and Imperial Hot Mineral Springs.

* This includes the following highways...
  CA Interstate 10 between mile markers 79 and 110.
  CA Route 111 between mile markers 48 and 65.
  CA Route 177 between mile markers 1 and 10.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

For your protection move to an interior room on the lowest floor of a
building.

Torrential rainfall is occurring with this storm, and may lead to
flash flooding. Do not drive your vehicle through flooded roadways.

&&

LAT...LON 3331 11551 3332 11577 3342 11584 3386 11588
      3382 11527 3340 11541
TIME...MOT...LOC 0139Z 186DEG 50KT 3345 11564
```

October 3, 2018 Exceptional Event, Imperial County **Appendix A**

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488
WWUS55 KPSR 040142
SVSPSR

Severe Weather Statement
National Weather Service Phoenix AZ
642 PM PDT WED OCT 3 2018

CAC025-065-040150-
/O.EXP.KPSR.SV.W.0090.000000T0000Z-181004T0145Z/
Imperial CA-Riverside CA-
642 PM PDT WED OCT 3 2018

...THE SEVERE THUNDERSTORM WARNING FOR NORTHWESTERN IMPERIAL AND
RIVERSIDE COUNTIES WILL EXPIRE AT 645 PM PDT...

The severe thunderstorm which prompted the warning has been replaced
by an updated severe thunderstorm warning. Therefore, the original
warning will be allowed to expire. However small hail, gusty winds
and heavy rain are still possible with this thunderstorm.

LAT...LON 3302 11554 3313 11577 3352 11576 3353 11553
      3336 11521 3309 11544
TIME...MOT...LOC 0140Z 199DEG 24KT 3335 11559

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JS
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053
WWUS55 KPSR 040228
SVSPSR

Severe Weather Statement
National Weather Service Phoenix AZ
728 PM PDT WED OCT 3 2018

CAC065-071-040245-
/O.CON.KPSR.SV.W.0092.000000T0000Z-181004T0245Z/
San Bernardino CA-Riverside CA-
728 PM PDT WED OCT 3 2018

...A SEVERE THUNDERSTORM WARNING REMAINS IN EFFECT UNTIL 745 PM PDT
FOR SAN BERNARDINO AND RIVERSIDE COUNTIES...

At 727 PM PDT, a severe thunderstorm was located 16 miles north of
Eagle Mtn, or 26 miles north of Desert Center, moving north at 35
mph.

HAZARD...60 mph wind gusts and quarter size hail.

SOURCE...Radar indicated.

IMPACT...Hail damage to vehicles is expected. Expect wind damage to
         roofs, siding, and trees.

Locations impacted include...
Eagle Mtn.

This includes CA Interstate 10 between mile markers 89 and 103.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

For your protection move to an interior room on the lowest floor of a
building.

Torrential rainfall is occurring with this storm, and may lead to
flash flooding. Do not drive your vehicle through flooded roadways.

&&

LAT...LON 3407 11532 3408 11526 3369 11544 3364 11558
      3367 11569 3404 11579 3404 11561 3409 11560
      3408 11554 3411 11552
TIME...MOT...LOC 0227Z 182DEG 61KT 3407 11557

HAIL...1.00IN
WIND...60MPH

$$

JS
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```
622
WWUS85 KPSR 040243
SPSPSR

Special Weather Statement
National Weather Service Phoenix AZ
743 PM PDT WED OCT 3 2018

CAZ564-570-040330-
Chuckwalla Mountains CA-Chuckwalla Valley CA-
743 PM PDT WED OCT 3 2018

...SIGNIFICANT WEATHER ADVISORY FOR NORTH CENTRAL IMPERIAL AND
RIVERSIDE COUNTIES UNTIL 830 PM PDT...

At 742 PM PDT, Doppler radar was tracking a strong thunderstorm 12
miles south of Desert Center, moving northeast at 35 mph.

Half inch hail and wind gusts of 50 to 55 mph will be possible with
this storm.

Locations impacted include...
Desert Center.

This includes the following highways...
CA Interstate 10 between mile markers 105 and 124.
CA Route 177 between mile markers 1 and 23.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Torrential rainfall is also occurring with this storm, and may lead
to localized flooding. Do not drive your vehicle through flooded
roadways.

&&

LAT...LON 3327 11525 3329 11532 3342 11536 3357 11546
      3401 11529 3392 11497 3332 11518
TIME...MOT...LOC 0242Z 203DEG 28KT 3354 11535

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JS
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582
WWUS55 KPSR 040303
SVSPSR

Severe Weather Statement
National Weather Service Phoenix AZ
803 PM PDT WED OCT 3 2018

CAC065-040315-
/O.CON.KPSR.SV.W.0093.000000T0000Z-181004T0315Z/
Riverside CA-
803 PM PDT WED OCT 3 2018

...A SEVERE THUNDERSTORM WARNING REMAINS IN EFFECT UNTIL 815 PM PDT
FOR RIVERSIDE COUNTY...

At 803 PM PDT, a severe thunderstorm was located 12 miles south of
Twentynine Palms Airport, or 17 miles southeast of Twentynine Palms,
moving north at 35 mph.

HAZARD...60 mph wind gusts and quarter size hail.

SOURCE...Radar indicated.

IMPACT...Hail damage to vehicles is expected. Expect wind damage to
         roofs, siding, and trees.

Locations impacted include...
Cottonwood Visitor.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

For your protection move to an interior room on the lowest floor of a
building.

Torrential rainfall is occurring with this storm, and may lead to
flash flooding. Do not drive your vehicle through flooded roadways.

&&

LAT...LON 3372 11578 3380 11598 3403 11597 3404 11561
      3403 11560
TIME...MOT...LOC 0303Z 186DEG 31KT 3397 11584

HAIL...1.00IN
WIND...60MPH

$$

JS
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```
595
WWUS85 KPSR 040332
SPSPSR

Special Weather Statement
National Weather Service Phoenix AZ
832 PM MST WED OCT 3 2018

AZZ530-531-CAZ564-565-569-570-040415-
Kofa AZ-Parker Valley AZ-Chuckwalla Mountains CA-
Imperial County Southeast CA-Palo Verde Valley CA-
Chuckwalla Valley CA-
832 PM MST WED OCT 3 2018

...SIGNIFICANT WEATHER ADVISORY FOR SOUTHWESTERN LA PAZ...SAN
BERNARDINO...NORTHEASTERN IMPERIAL AND RIVERSIDE COUNTIES UNTIL 915
PM MST/915 PM PDT/...

At 832 PM MST/832 PM PDT/, Doppler radar was tracking a strong
thunderstorm 13 miles west of Palo Verde, or 36 miles southeast of
Desert Center, moving northeast at 30 mph.

Half inch hail and wind gusts up to 50 mph will be possible with this
storm.

Locations impacted include...
Blythe, Nicholls Warm Springs, Cibola, Palo Verde, Midland, Blythe
Airport and Ripley.

This includes the following highways...
CA Interstate 10 between mile markers 118 and 151.
CA Route 78 between mile markers 51 and 80.
CA Route 177 between mile markers 12 and 18.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Torrential rainfall is also occurring with this storm, and may lead
to localized flooding. Do not drive your vehicle through flooded
roadways.

&&

LAT...LON 3401 11489 3386 11472 3330 11451 3313 11472
      3303 11507 3334 11505 3388 11528 3409 11512
      3409 11508
TIME...MOT...LOC 0332Z 239DEG 24KT 3335 11495

$$

JS
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```
352
WWUS85 KPSR 040417
SPSPSR

Special Weather Statement
National Weather Service Phoenix AZ
917 PM MST WED OCT 3 2018

AZZ530-531-533-CAZ569-570-040500-
Kofa AZ-Parker Valley AZ-Central La Paz AZ-Palo Verde Valley CA-
Chuckwalla Valley CA-
917 PM MST WED OCT 3 2018

...SIGNIFICANT WEATHER ADVISORY FOR WEST CENTRAL LA PAZ...SAN
BERNARDINO...NORTHEASTERN IMPERIAL AND RIVERSIDE COUNTIES UNTIL 1000
PM MST/1000 PM PDT/...

At 917 PM MST/917 PM PDT/, Doppler radar was tracking a strong
thunderstorm over Midland, or 33 miles east of Desert Center, moving
northeast at 15 mph.

Half inch hail and wind gusts up to 50 mph will be possible with this
storm.

Locations impacted include...
Blythe, Nicholls Warm Springs, Cibola, Palo Verde, Midland, Blythe
Airport, Ripley, East Blythe and Ehrenberg.

This includes the following highways...
AZ Interstate 10 between mile markers 1 and 8.
CA Interstate 10 between mile markers 139 and 156.
CA Route 78 between mile markers 75 and 80.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

Torrential rainfall is also occurring with this storm, and may lead
to localized flooding. Do not drive your vehicle through flooded
roadways.

&&

LAT...LON 3401 11446 3359 11438 3339 11441 3334 11474
      3336 11481 3353 11481 3388 11496 3408 11491
      3408 11454
TIME...MOT...LOC 0417Z 219DEG 13KT 3386 11484

$$

JS
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October 3, 2018 Exceptional Event, Imperial County **Appendix A**

```
320
FXUS66 KSGX 040430 AAA
AFDSGX

Area Forecast Discussion
National Weather Service San Diego CA
930 PM PDT Wed Oct 3 2018

.SYNOPSIS...
A trough of low pressure will bring scattered showers and isolated
thunderstorms to parts of Southern California overnight through
Thursday morning. Cool and unsettled weather is likely this weekend
as another trough moves in from the north. This trough will bring
gusty winds to the mountains and deserts this weekend, and a chance
for light showers over the coastal and valley areas.

&&

.DISCUSSION...FOR EXTREME SOUTHWESTERN CALIFORNIA INCLUDING ORANGE...
SAN DIEGO...WESTERN RIVERSIDE AND SOUTHWESTERN SAN BERNARDINO
COUNTIES...

Isolated showers continue this evening across the region. The cooler
air is filtering in with the 00Z Miramar sounding indicating about 4
degrees of mid level cooling since 12Z. The upper low is passing by
to our north attm. Earlier cells over the SJV had quite a bit of
terrain and upper low induced circulation noted on radar. Cells have
been weaker in SoCal all evening and more widely scattered.
Meanwhile the upper level trough will pass over the region overnight
with weakening intensity and opening up further through Thursday
morning. With all this said residual moisture is moderate with the
00Z San Diego sounding indicating PWAT 1.02" down from 1.32" at 12Z,
so isolated showers will likely continue overnight in the general
forcing of the trough and modest instability. The risk for
thunderstorms has also declined with the loss of heating but cannot
rule out a rogue thunderstorm overnight in this environment. With
all this said, the current forecast pops/wx/sky cover all look
reasonable and no significant changes were necessary. Isolated
showers will continue through midday Thursday.

A weak shortwave slides down the coast Thursday night and traverses
SoCal Friday morning which will help to reform the marine layer.
Overall it won't have much impact, but there may be patchy drizzle
west of the mountains. This will be followed by a much deeper trough
that dives into the Intermountain West this weekend. This deep
trough will bring gusty winds to the mountains and deserts, and a
chance for a few showers west of the mountains from strong onshore
flow, a marginal over-water trajectory, and a fairly large coastal
eddy. Depending on the magnitude and the southern extent of the
trough, there may be a period of offshore flow Monday.

Outlook beyond Monday: Dry northwest flow Tuesday is followed by
another deep trough over the northern Great Basin for cooler than
average weather through the middle of next week.

&&

.AVIATION...
040330Z...Coast/Valleys/Mountains...SHRA activity will continue
tonight, with a chance of isolated TS through 08Z Thu. Expect
widespread SCT-BKN with CIGS 4000-6000 ft MSL, with areas of OVC
with bases 1500-2500 ft MSL during SHRA activity. Areas of vis 3-5
mi possible during showers and on the coastal slopes. Isolated SHRA
should continue into Thu afternoon, although coverage will be very
limited.

Deserts...Isolated SHRA and TS are possible through 08Z Thu,
clearing out thereafter. Moderate W to NW winds gusting to 20-25
knots are possible near the surface 06-12Z Fri.
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October 3, 2018 Exceptional Event, Imperial County **Appendix A**

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&&

.MARINE...
No hazardous marine weather is expected Thursday through Saturday
morning. Another weak cold front could bring more showers and gusty
winds sometime Saturday afternoon into Sunday.

&&

.BEACHES...
A slight chance of isolated thunderstorms before 08Z Thu.

&&

.SKYWARN...
Skywarn has been activated for San Bernardino County. We may
activate Orange and Riverside County this afternoon.

&&

.SGX WATCHES/WARNINGS/ADVISORIES...
CA...NONE.
PZ...NONE.

&&

$$

PUBLIC...Moede/JMB
AVIATION/MARINE/BEACHES...Rodriguez
```

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276
ASUS66 KSGX 041227
RTPSGX

:SOUTHWESTERN CALIFORNIA TEMPERATURE AND PRECIPITATION SUMMARY
:NATIONAL WEATHER SERVICE SAN DIEGO CA
:530 AM PDT THU OCT 04 2018
:
:***** UPDATED *****
:
:YESTERDAYS HIGH AND 12 HOUR LOW TEMPERATURES AS OF 5 AM TODAY.
:   * DENOTES 24 HOUR HIGH TEMPERATURES AS OF 5 PM YESTERDAY.
:     OCCASIONALLY THE HIGH TEMPERATURE MAY HAVE OCCURRED AFTER
:     5 PM THE PREVIOUS DAY.
:
:PRECIPITATION FOR THE PAST 24 HOURS.   M DENOTES MISSING.
:   T DENOTES TRACE OF PRECIPITATION
:
.BR SGX 1004 P DH01/TAIRZX/DH04/TAIRZP/PPDRZZ/SDIRZZ
:
: ID :      STATION           ELEV : HIGH / LOW /  PCPN / SNODEP
:                             FEET                        INCHES
:
:        ...COASTAL AREAS...
:
SDYBL:      YORBA LINDA        370 :   81 /  63 /     M /
FUL  :      FULLERTON AIRPORT   96 :    M /   M /  0.38 /
ANAC1:    * ANAHEIM            335 :   81 /   M /     M /
STAC1:      SANTA ANA          135 :   79 /  65 /  0.05 /
SDHTB:      HUNTINGTON BEACH     5 :   76 /  62 /     M /
SNA  :      JOHN WAYNE AIRPORT  55 :   76 /  65 /  0.11 /
3L3  :    * NEWPORT BEACH       10 :   71 /   M /     M /
LAGC1:      LAGUNA BEACH        35 :    M /   M /     M /
SDFRH:      LAKE FOREST        970 :   77 /  60 /  0.35 /
L34  :      OCEANSIDE HARBOR    10 :   73 /  67 /  0.00 /
OKB  :      OCEANSIDE AIRPORT   28 :   78 /  66 /    T  /
SDVIS:      VISTA              330 :   78 /  65 /  0.38 /
CRQ  :      CARLSBAD AIRPORT   328 :   74 /  64 /  0.51 /
SDETS:      ENCINITAS          270 :   76 /  64 /     M /
SDDMB:      DEL MAR BEACH       10 :   72 /  66 /  0.52 /
NKX  :      MIRAMAR            477 :   83 /  67 /  0.13 /
MYF  :      MONTGOMERY FIELD   420 :   78 /  67 /    T  /
SAN  :      SAN DIEGO INT'L AP  15 :   76 /  69 /    T  /
SDNAC:      NATIONAL CITY       25 :   76 /  68 /  0.00 /
CVAC1:      CHULA VISTA         65 :   76 /  67 /  0.00 /
NRS  :      IMPERIAL BEACH      23 :   76 /  66 /  0.00 /
SDM  :      BROWN FIELD        525 :   80 /  65 /    T  /
:
:        ...INLAND AREAS...
:
ONT  :      ONTARIO            943 :   79 /  63 /    T  /
CNO  :      CHINO              652 :   81 /  64 /  0.07 /
SDALO:      RANCHO CUCAMONGA  1940 :   73 /  59 /  0.01 /
```

October 3, 2018 Exceptional Event, Imperial County **Appendix A**

```
SBD  :      SAN BERNARDINO    1086 :   81 /  64 /     M /
AJO  :      CORONA             531 :   79 /  62 /  0.05 /
RAL  :      RIVERSIDE AIRPORT  818 :   79 /  63 /  0.30 /
UCRC1:      RIVERSIDE          986 :   76 /  63 /  0.24 /
RIV  :      RIVERSIDE MARCH   1542 :   78 /  61 /  0.09 /
BUO  :      BEAUMONT          2680 :   76 /  57 /  0.15 /
SDLEL:      LAKE ELSINORE     1275 :   83 /  62 /  0.14 /
SDHET:      HEMET             2050 :   78 /  60 /  0.09 /
SDTEC:      TEMECULA          1020 :   80 /  65 /  0.00 /
SDFBK:      FALLBROOK          698 :   81 /  65 /  0.00 /
VCFC1:      VALLEY CENTER     1312 :   78 /  62 /  0.08 /
SDSMP:      SAN MARCOS         630 :   79 /  64 /  0.43 /
ESCC1:      ESCONDIDO          645 :   81 /  65 /  0.42 /

PSQC1:      SAN PASQUAL VALLEY 255 :   82 /  64 /  0.19 /
RNM  :      RAMONA AIRPORT    1393 :   80 /  62 /  0.16 /
SGX  :      RANCHO BERNARDO    690 :   78 /  63 /  0.24 /
SDPOY:      POWAY              597 :   81 /  65 /  0.08 /
ALPC1:      ALPINE            1695 :   77 /  61 /  0.00 /
SDLAM:      LA MESA            500 :   77 /  65 /  0.00 /
SDSNL:      SANTEE             435 :   81 /  65 /  0.01 /
ELJC1:      EL CAJON           405 :   80 /  66 /  0.00 /
SDRSC:      RANCHO SAN DIEGO   400 :   78 /   M /     M /
LMGC1:      LEMON GROVE        427 :   76 /  66 /  0.00 /
:
:        ...MOUNTAIN AREAS...
:
ECSC1:      EL CARISO         2730 :   77 /  56 /  0.10 /
SDWRT:      WRIGHTWOOD        5980 :   63 /  44 /  0.00 /
SDARN:      LAKE ARROWHEAD    5180 :   63 /  50 /  0.16 /
BBLC1:      BIG BEAR LAKE     6768 :   61 /  45 /  0.01 /
SDBDN:      BALDWIN LAKE      6770 :   63 /  45 /  0.00 /
SDAOK:      ANGELUS OAKS      5800 :   59 /  46 /  0.02 /
IDYC1:      IDYLLWILD         5380 :   68 /  50 /  0.10 /
NZAC1:      ANZA              3939 :   75 /  54 /  0.00 /
PYNC1:      PINYON PINES      4060 :   76 /  55 /  0.00 /
PLRC1:    * PALOMAR MOUNTAIN  5550 :    M /   M /     M /
JULC1:      JULIAN            4240 :   66 /  52 /  0.00 /
MLNC1:    * MOUNT LAGUNA      5920 :   65 /   M /     M /
CPMC1:    * CAMPO COOP        2615 :   80 /   M /     M /
:
:        ...DESERT AREAS...
:
HESC1:      HESPERIA          3055 :   74 /  58 /  0.00 /
APLC1:      APPLE VALLEY      2780 :   74 /  52 /  0.00 /
PSP  :      PALM SPRINGS       425 :   92 /  72 /  0.00 /
IDOC1:      INDIO               -21 :   91 /  71 /  0.17 /
TRM  :      THERMAL           -117 :   96 /  72 /  0.00 /
BROC1:    * BORREGO SPRINGS    805 :   91 /  73 /  0.00 /
SDOCL:      OCOTILLO WELLS     149 :   94 /  74 /  0.00 /
BLH  :      BLYTHE             397 :   94 /  70 /  0.06 /
IPL  :      IMPERIAL           -56 :   93 /  71 /  0.00 /
.END
```

```
THESE DATA ARE PRELIMINARY AND HAVE NOT UNDERGONE FINAL QUALITY CONTROL BY THE
NATIONAL CLIMATIC DATA CENTER (NCDC). THEREFORE, THESE DATA ARE SUBJECT TO
REVISION. FINAL AND CERTIFIED CLIMATE DATA CAN BE ACCESSED AT WWW.NCDC.NOAA.GOV.

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